

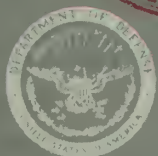
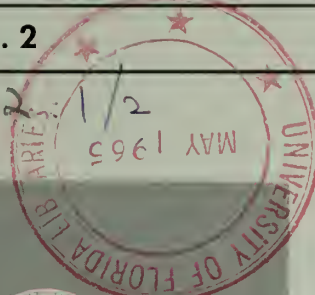
# DEFENSE INDUSTRY BULLETIN

Volume 1 No. 2

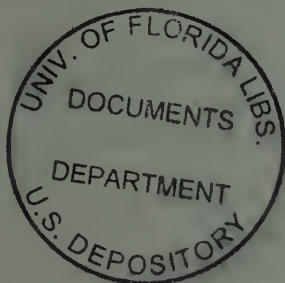
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## DEPARTMENT OF DEFENSE



Publication of  
**ASSISTANT SECRETARY OF  
DEFENSE-PUBLIC AFFAIRS**

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### PRESIDENT LYNDON B. JOHNSON ON DEFENSE BUDGET



"... In preparing this budget, I have applied exacting tests of efficiency and necessity to all proposed expenditures.

"... We cannot afford second-best defense forces. Neither can we afford to be wasteful.

"Our defense forces have reached new levels of strength. With the rapid strides made in the past four years and the future gains already sched-

uled, our powerful modern forces will be adequate to their tasks for years to come.

"... We still have improvements to make. We must maintain a strong research and development program to insure that our forces are always the most modern in the world.

"The 1966 budget fully provides for these needs.

"However, we are able to reduce our defense expenditures in 1966 because:

"• The buildup of our forces which started in 1961 is nearly complete.

"• The vigorous cost reduction program of the Department of Defense is producing large savings.

"• Less effective and less economical forces are being retired or reduced as promptly as possible. . . ."



# DEFENSE INDUSTRY BULLETIN

Published by the Department  
of Defense

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The purpose of the *BULLETIN* is to serve as a means of communication between the Department of Defense (DOD) and its authorized agencies and defense contractors and other business interests. It will serve as a guide to industry concerning official policies, programs and projects, and will seek to stimulate thought by members of the defense-industry team in solving the problems that may arise in fulfilling the requirements of the DOD.

Material in the *BULLETIN* is selected to supply pertinent unclassified data of interest to the business community. Suggestions from industry representatives for topics to be covered in future issues should be forwarded to the Business & Labor Division.

The *BULLETIN* is distributed each month to the agencies of Department of Defense, Army, Navy, and Air Force, and to representatives of industry. Request for copies should be addressed to the Business & Labor Division, OASD/PA, Room 2E813, The Pentagon, Washington, D.C. 20301.

Contents of the magazine may be reprinted freely without requesting permission. Mention of the source will be appreciated.

## Defense Department Budget Breakdown

In this issue of the *Defense Industry Bulletin* are featured financial tables pertaining to the Defense Budget. Prepared by the Office of Assistant Secretary of Defense (Comptroller), these tables present the Fiscal Year 1966 budget in relation to the budgets of recent years.

The tables appear on pages 17 to 25 and pertain to the following areas:

1. Financial Summary, FY 1961 to FY 1966.
2. Direct Budget Plan [Total Obligational Authority (TOA)], New Obligational Authority (NOA), Direct Obligations and Expenditures, FY 1964–1966.
3. Direct Budget Plan (TOA), New Obligation Authority, Direct Obligations and Expenditures, FY 1966—By Function and Service.
4. Procurement, FY 1964–1966.
5. Research, Development, Test and Evaluation, FY 1964–1966.
6. Estimated Obligations & Amounts Available for Obligation, General Fund Appropriations, FY 1964–1966.
7. Estimated Expenditures and Amounts Available for Expenditure, FY 1964–1966.
8. Order of Magnitude Data on Comparative New Obligational Authority by Functional Title as if FY 1966 Budget Structure Had Been Adopted Circa 1948, FY 1954–1966.
9. Order of Magnitude Data on Comparative Expenditures by Functional Title as if FY 1966 Budget Structure Had Been Adopted Circa 1948, FY 1954–1966.

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## USAF Contract Management Division Established

Responsibility for Department of Defense contract management activities in those contractor plants allocated to the Air Force under the DOD National Plant Cognizance Program was assigned to a new division of the Air Force Systems Command in January. Called the Contract Management Division and located at Los Angeles Air Force Station, Los Angeles, Calif., activities of the new organization will include Air Force Plant Representative Offices, Test Site Offices, and Contract Support Detachments. It will eventually absorb the current Air Force field units and responsibilities of the Western Contract Management Region, Los Angeles, Calif., some plant offices of the Eastern Contract Management Region, Olmsted AFB, Pa., and the Central Contract Management Region, Wright-Patterson AFB, Ohio.

The division activities will allow orderly realignment of the Air Force contract management responsibilities to assist in achieving the objectives of actions taken by the DOD for overall field contract administration improvement as recommended by Defense Project 60.

Colonel Fred L. Rennels, Jr., who formerly commanded the Western Contract Management Region, is the Commander of the Contract Management Division.



# Navy R&D Stages Of The Procurement Process

Procurement is in the broadest sense of the word a process. It is a chain of events in which an abstraction passes through linking stages of study, research, design, development, and testing and finally emerges as a hardware system ready for fleet use and full scale production.

Purchasing is, of course, part of this process. Yet it is but a link in the chain and the effectiveness with which it can be performed is inevitably conditioned by decisions in the early stages.

It follows therefore that purchasing personnel seek to influence these earlier decisions—make them as compatible as possible with sound procurement practice.

One avenue of influence is through feedback on procurement problems such as those created, for instance, by technical decisions that foreclose competition by prescribing overly restrictive specifications, failing to provide for technical data, or overlooking the potential for breakout.

Another is through Advance Procurement Planning (APP), which injects good business analysis and lays the foundation for effective procurement early in the planning stages.

Both measures, however, imply an appreciation and understanding of the full sweep of

the procurement process. This article is an attempt to promote a better understanding of procurement by focusing on the Navy terms and procedures of the Research and Development (R&D) stages.

## EARLY PLANNING DOCUMENTS

Eight documents figure prominently in the early stages of the procurement process. Their interrelationship is shown in Figure 1. Two of the documents, the Naval Research Requirement (NRR) and Exploratory Development Requirement (EDR), contribute primarily to the "pool" of knowledge that is the wellspring for the conception of new systems. The other six documents are part of a process that contributes directly to the evolution of particular systems.

The eight planning documents are described as follows:

- **Naval Research Requirement (NRR).** The NRR is prepared by the Chief of Naval Research. It starts basic research and applied research in support of future needs.

- **Exploratory Development Requirement (EDR).** The EDR is prepared by the Chief of Naval Development. It initiates studies and investigations on military problems which must be solved to meet future needs projected from the General Operational Requirement.

- **General Operational Require-**

**ment (GOR).** A GOR is prepared by the Chief of Naval Operations (CNO). It states the broad capabilities required in the fleet to meet the longrange needs.

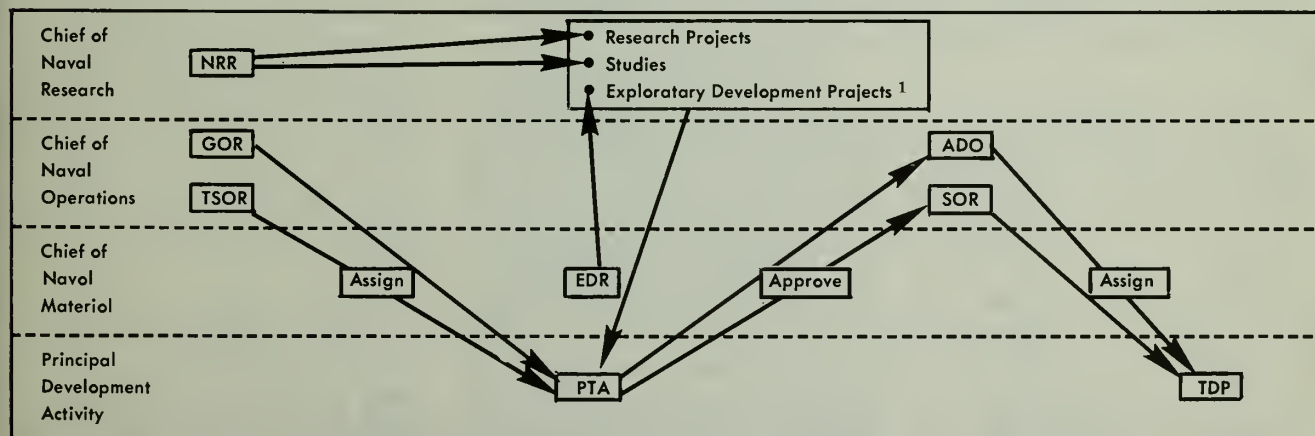
- **Tentative Specific Operational Requirement (TSOR).** A TSOR is prepared by CNO. It initiates investigations leading to a new specific capability. The TSOR sets performance goals and provides information for making the trade-offs for an optimum system.

- **Proposed Technical Approaches (PTA).** A PTA is developed by the Principal Development Activity (PDA) which may be any of the Naval Bureaus, the Marine Corps and the Office of Naval Research, and includes Project Management Offices. Its key purpose is to provide trade-off analyses among the various approaches.

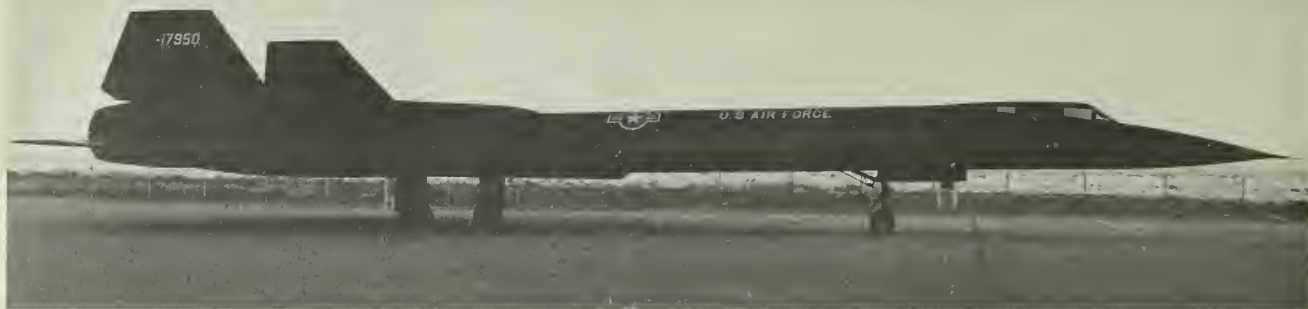
- **Advanced Development Objective (ADO).** An ADO is prepared by CNO. It outlines a requirement for an experimental system whose military usefulness, technical feasibility and financial acceptability is not yet assured. Its objective is to gain knowledge and, if necessary, to call for the development of hardware or experimentation to get the knowledge needed to support or to deny the issuance of a Specific Operational Requirement.

- **Specific Operational Requirement (SOR).** An SOR is prepared by CNO. It tells the Chief

Figure 1. System Development Document Flow



<sup>1</sup> EDP are also performed in the material bureaus.



**SR-71**—The Air Force's new jet underwent its first flight test recently and passed with flying colors. Powered by two Pratt & Whitney J-58 engines, the SR-71 is built by Lockheed for the Strategic Air Command. Its specifications put it well into the Mach-3 class. Although the plane is designed to operate at altitudes over 80,000 feet, its civilian test pilot held the maiden flight to just over 45,000 feet. When produced, this long-range strategic reconnaissance plane will take its place at Beale AFB, Calif.

of Naval Material (CNM) of the need to develop a particular operational capability. The SOR is the final stage in requirements documentation and normally marks the transition from research to systems development.

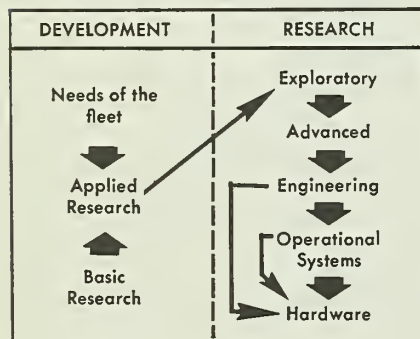
• **Technical Development Plan (TDP).** A TDP is prepared by the Principal Development Activity. It is the plan for fulfilling the requirement of the SOR or ADO. Once funded after approval by CNO, it is the authority to begin the development project.

## THE RESEARCH & DEVELOPMENT CYCLE

In theory systems evolve by advancing through the successive states of the R&D cycle illustrated in Figure 2. This is the classic pattern. In practice new systems originate at almost any point in the cycle, depending upon earlier research and exploratory development and relative military importance.

The following are brief descriptions of the stages in the R&D cycle.

**Figure 2. The R&D Cycle**



• **Research** is in the realm of ideas and theory. If it aims to increase man's knowledge of natural phenomena and environment by exploration in the physical, behavioral, and social sciences, mathematics, and medicine it is basic research. If it is in support of a fleet need it is applied research.

• **Exploratory development** concentrates on solving specific military problems, and on determining the feasibility of the military application of the ideas, conceptions, inventions, innovations, breakthroughs, etc. that evolve from all research in and out of the Navy, contracted or independent.

• **Advanced development** concentrates on the development of hardware for experimental or operational test as opposed to projects for items designed and engineered for eventual service use. Projects in this stage represent a deliberate assault on the boundaries of the state-of-the-art.

• **Engineering development** is the state in which a complete set of hardware is produced, suitable for both operational testing and to serve as a prototype for further production. Included are those development programs being engineered for service use but which have not yet been approved for procurement or operation.

• **Operational systems development** is the stage in which the R&D effort moves into the development, engineering and test of systems, support programs,

vehicles and weapons that have been approved for production and service employment. The key difference between engineering development and operational systems development is that the latter has been approved for production and procurement.

## THE USER-PRODUCER DIALOGUE

So far the focus has been on documents and the stages of the R&D cycle. Both of these play a major part in the dialogue between the user and producer interests of the Navy. This dialogue proceeds generally as follows:

The user, CNO, expresses fleet needs to the producer, CNM. CNM in response advises CNO of the technical feasibility of producing what is needed, the possible approaches, the economic considerations in the production of needed items, and the time scales on which they might be developed and produced.

CNO selects the approach to be taken and so informs CNM, who performs the work. At appropriate times both CNO and CNM appraise what is being done—CNO for the military worth of the system being produced and CNM in terms of utilization of resources and efficiency of production or development.

In the context of this user-producer dialogue a project would advance through the successive R&D cycle stages in the following manner (see Figures 1 and 2):

(Cont. on page 8)



# Defense Atomic Support Agency Streamlined For Greater Efficiency

The Defense Atomic Support Agency (DASA), with roots in World War II's historic Manhattan Project, has been reorganized. The Office of the Secretary of Defense, in making this announcement recently, pointed out that reorganization resulted from studies launched in 1962 by the Office of the Director, Organizational and Management Planning.

It is expected that reorienting DASA's internal and external relationships will help it achieve full effectiveness in its primary mission of providing support to the defense establishment wherever nuclear weapons, including their effects and testing, are concerned.

As a Defense Department agency, DASA is jointly staffed. The Director, Deputy Director (Operations & Administration) and Deputy Director/Commander, Field Command, generally come from the three Military Services; a third Deputy Director (Scientific) is a civilian scientist.

Most DASA Headquarters functions are carried out in its Pentagon offices. One important element, however, is located, along with the important DASA Field Command, in New Mexico at Sandia Base, near Albuquerque. This is the Weapons Test Division.

## Formerly Armed Forces Special Weapons Project

Following World War II, the Manhattan Project was disestablished by the Atomic Energy Act of 1946. In its place two

agencies were created. One, the Atomic Energy Commission (AEC), inherited responsibility for research, production and control. The second, the Armed Forces Special Weapons Project (AFSWP), was built around a nucleus of erstwhile Manhattan Project military personnel. Its mission was "to furnish support to the Army, Navy and Air

Force in the field of atomic weapons by providing technical, logistic and training services."

In 1959, following the President's Reorganization Act of 1958, the AFSWP was renamed the Defense Atomic Support Agency. Apart from the change of name, however, the organization's structure remained vir-

*(Cont. on page 12)*

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## Defense Contract Administration To Administer Industrial Security

Responsibility for the administration of the Department of Defense Industrial Security Program, operating in over 25,000 United States industrial, educational and research facilities, is to be transferred shortly from the Departments of the Army, Navy and Air Force to the Defense Contract Administration Services (DCAS) of the Defense Supply Agency.

The program, which has been in operation since 1951 under the administration of the three Military Departments, is one of several functions relating to defense contracting for which the newly established DCAS will assume responsibility. Security cognizance over individual facilities will be shifted gradually to the new activity.

In this connection, a new revision to the Industrial Security Manual for Safeguarding Classified Information (Attachment to DD Form 441) will become effective on March 22, 1965. This manual establishes uniform security practices within industrial plants or educational institutions and all organizations and facilities used by prime and subcontractors having in their custody classified information of the Defense Department, certain other Executive Departments and agencies, or certain foreign governments.

Distribution of the revised manual to all defense contractors will be made by the cognizant defense security offices beginning in February. Additional copies may be purchased at the Government Printing Office, Washington, D.C., after March 22. GPO has not yet announced the price of the publication.

The preparation and publication of this manual and other regulations on industrial security, previously discharged by the Office of the Deputy Assistant Secretary of Defense (Security Policy), will in the future be the responsibility of DCAS. However, responsibility for the formulation of industrial security policy will be retained by the Deputy Assistant Secretary of Defense (Security Policy).

# Active U.S. Role in 1965 Paris Air Show Announced by DOD

The Department of Defense, working with other Government agencies, is planning for a more active role of the U.S. Government in the 1965 Paris Air Show to be held at Le-Bourget Airport, June 11-20. DOD will support and assist aerospace industries who plan to participate in this event.

According to Mr. Henry J. Kuss, Jr., Deputy Assistant Secretary of Defense (International Logistics Negotiations), the purpose of U.S. participation is to (1) promote foreign sales of U.S. aerospace products and services; (2) to manifest U.S. defense capability and contributions to maintenance of world peace; (3) to project an image of the U.S. as the world leader in aerospace research, development, and production; (4) to demonstrate achievements; and (5) to provide an official U.S. presence identified with commercial U.S. activities.

Mr. Kuss points out that all firms planning to participate should initiate their applications for export licenses, bailment of equipment and clearance of technical data at the earliest possible date to insure completion by Air Show time. All communications with Government agencies should be clearly marked "Paris Air Show" so that the proper individual in each case will be alerted.

The Secretary of Defense, in cooperation with the Department of Commerce, has approved DOD support for a Business Information Center (BIC) to assist promoting foreign sales of U.S. products and services. The BIC will be the focal point of all official U.S. activities. It will be equipped with conference rooms, a technical library and a small theater geared to support U.S. industry. It will also house a Joint U.S. Information Center (JUSIC) consisting of representatives from Defense, Commerce, USIA, a Commerce-contracted public relations firm and technical advisers from industrial associations.

The following two lists indicate the military aircraft scheduled to be

shown in the Air Show and designated Air Show contacts. Plans for inclusion of other military aircraft are under consideration.

## U.S. Military Aircraft To Be Shown In Paris Air Show

### Army

OV-1B Mohawk  
UH-1B Iroquois  
CH-37B Mojave  
OH-13H Sioux  
CH-47A Chinook  
LOH (Availability at Air Show time has not yet been determined.)  
XV-5A (Fan in Wing, General Electric-Ryan. Status of the program at time of Air Show will determine its availability.)

### Navy

(Flyovers by four of the following Sixth Fleet aircraft and a static display of an additional one each throughout the Show.)

RA-5C Vigilante  
A-6A Intruder  
A-4C Skyhawk  
F-4B Phantom II  
Based on availability, to be determined early in 1965, flyover and/or static display of the following aircraft:

P-3A Orion  
E-2A Hawkeye  
Trans-Atlantic flight and static display of one of the following helicopters (to be announced later):  
CH-53A Sea Stallion  
YH-46A Sea Knight  
16 H Ringtail Aircraft  
Demonstrations by the "Blue Angels" in F-11A aircraft.

### Air Force

C-141 Starlift (with 463L demonstration of Army mobile hospital)  
C-130 Hercules  
F-5A/B Freedom Fighter  
Aircraft planned for static display:  
RF-101 Voodoo  
F-102 Delta Dagger  
F-105 Thunderchief  
KC-135 Stratotanker  
C-140 Jetstar  
T-39 Sabreliner  
H-43B

Demonstrations by the USAF "Thunderbirds" in F-100 aircraft.

Plans for inclusion of other military aircraft are under consideration on which decisions are not yet resolved.

## Designated Contacts

### Department of Defense

Maj. Ronald H. Everett  
Office of Asst. Secretary of Defense (Public Affairs)  
Room 2E733, The Pentagon  
Washington, D.C. 20301  
Telephone: Area Code 202, Oxford 5-6795

### Army

Lt. Col. Thomas E. Thompson  
Office of Chief of Information  
Room 2E641, The Pentagon  
Washington, D.C. 20310  
Telephone: Area Code 202, Oxford 7-7550

### Navy

Capt. George F. Rodgers  
Office of Chief of Naval Operations  
OP-05A6, Room 4E409, The Pentagon  
Washington, D.C. 20350  
Telephone: Area Code 202, Oxford 7-5973

### Air Force

Maj. William J. D. Taylor  
Office of Director of Information  
Room 4C878, The Pentagon  
Washington, D.C. 20330  
Telephone: Area Code 202, Oxford 7-5226

### Department of State

Mr. Ralph H. Cadeaux  
Office of Munitions Control  
1711 New York Avenue NW  
Washington, D.C. 20520  
Telephone: Area Code 202, DUpont 3-4621

### Department of Commerce

Mr. W. Bradlee Smith  
Bureau of International Commerce  
Office of International Trade Promotion  
Room 6823, Main Commerce Building  
Washington, D.C. 20230  
Telephone: Area Code 202, Woodley 7-3176

### U. S. Government Coordinator in Paris

Mr. Roe Preston  
Special Assistant to the Ambassador  
American Embassy  
Paris, France  
Telephone: ANjou 7460



## DEPARTMENT OF DEFENSE

William B. Petty has been named Director, and Edward T. Cook the Dep. Director of the recently established Defense Contract Audit Agency. Mr. Petty was formerly Dep. Comptroller of the Air Force and Mr. Cook was Navy Director of Contract Audit.

Townsend W. Hoopes, formerly a partner in the New York management consultant firm of Cresap, McCormack and Paget, has been appointed Dep. Asst. Secretary of Defense for Near East, South Asia Affairs and MAP Policy Review in the Office of the Asst. Secretary of Defense (International Security Affairs).

Capt. Fredric D. Bardshar, USN (RAdm. selectee), has been appointed Chief, Requirements & Development Div., Office of Joint Chiefs of Staff, Washington, D.C.

Maj. Gen. George P. Sampson, USA, Dep. Director, Defense Communications System, Defense Communications Agency, retired on January 31 after more than 35 years active military duty. While Gen. Sampson's contributions to military communications-electronics have been numerous and far-reaching, he is perhaps best known for his work in finalizing the many technical difficulties associated with the inception of the now existing "Hot Line" between Moscow and Washington. He was the technical negotiator at the Geneva conference which approved this important direct communications system and, for this outstanding public service, was chosen the 1964 recipient of the Dubois Medal. Gen. Sampson will be replaced by Maj. Gen. George E. Pickett, USA, presently Dir. of Officer Personnel, in the Army Office of Personnel Operations.

## ARMY

Gen. Paul L. Freeman has been named Commanding General, U.S. Continental Army Command, replacing Gen. Hugh P. Harris who is retiring.

Gen. Andrew P. O'Meara, currently Commander in Chief, Caribbean Command, will replace Gen. Freeman as Chief, U.S. Army Europe, and Commander of the Central Army Group



## ABOUT PEOPLE

of the North Atlantic Treaty Organization.

## NAVY

The President has announced the appointment of Kenneth E. BeLieu as Under Secretary of the Navy and Graeme C. Bannerman as Asst. Secretary of the Navy (Installations & Logistics).

Mr. BeLieu was formerly the Asst. Secretary of the Navy (Installations & Logistics), a position he has held since Feb. 7, 1961. Mr. Bannerman was formerly Dep. Asst. Secretary of Defense (Procurement), a position he has occupied since Feb. 1961.

The Navy has announced the following flag officer changes: VAdm. John S. Thach, Dep. Chief of Naval Operations (Air), was nominated for promotion to rank of Admiral and designated to succeed Adm. Charles D. Griffin as Commander, U.S. Naval Forces Europe. Adm. Griffin will replace Adm. James S. Russell, who will retire on April 1, as Commander in Chief, Allied Forces, Southern Europe. VAdm. Paul H. Ramsey, Commander, Naval Air Force Atlantic Fleet, will become Dep. Chief of Naval Operations (Air).

VAdm. William A. Schoech, Chief of Naval Material, will retire on March 1. RAdm. I. J. Galantin, nominated for rank of Vice Admiral, has been designated to succeed VAdm. Schoech.

The Chief of Naval Material has established two Assistant Chief of Naval Material positions to clarify responsibilities and improve coordination of the procurement and logistics functions of the Deputy Chief of Naval Material (Materials & Facilities). Appointed to the new positions are: Capt. Joseph L. Howard, Asst. Chief of Naval Material (Procurement), who is responsible for developing and promulgating policies and

methods of procurement, contracting, contract administration, and contractor performance for material and services throughout the Navy Department; and Capt. John B. Ritch, Jr., Asst. Chief of Naval Material (Logistic Support), who is responsible for developing and coordinating policies and programs within the Naval Material Support Establishment (NMSE) which relate to maintenance and supply management, standardization, quality control, value engineering and engineering support, and all facets of real estate and facilities.

## AIR FORCE

Gen. John Paul McConnell, a veteran of more than 32 years of commissioned service, has succeeded Gen. Curtis E. LeMay as Chief of Staff, U.S. Air Force. Gen. LeMay retired on Feb. 1.

Gen. McConnell has been Air Force Vice Chief of Staff since Aug. 1, 1964, having been named to that post while Deputy Commander-in-Chief, U. S. European Command, an assignment he had filled since October 1962.

A native of Booneville, Ark., Gen. McConnell was graduated from the U. S. Military Academy in 1932 and received his wings at Kelly Field, Tex., in 1933.

A veteran of more than 11 years with the Strategic Air Command, Gen. McConnell has served in Air Force assignments in both Europe and Asia. As a pursuit pilot during his early Army Air Corps career, he moved through observation operations, bombers and training duties, with World War II service in Washington, China-Burma-India Theater of Operations and the Southeast Air Command.

Among his decorations are the Distinguished Service Medal, Legion of Merit with three Oak Leaf Clusters and the Distinguished Flying Cross.

Lt. Gen. W. H. Blanchard has been nominated for promotion to rank of general and reassignment from Dep. Chief of Staff, Plans & Operations, to Vice Chief of Staff.

The following general officers have been nominated for promotion to rank of lieutenant general in the positions

indicated: Maj. Gen. J. V. Edmundson in his present position as Dir. of Inspection Services, Office of Asst. Secretary of Defense (Admin.); Maj. Gen. W. K. Martin reassigned from Asst. Vice Chief of Staff to The Inspector General; and Maj. Gen. R. J. Friedman reassigned from Asst. Dep. Chief of Staff, Programs & Requirements, to Dep. Chief of Staff, Programs & Requirements. Also approved for reassignment were the following: Lt. Gen. K. K. Compton from The Inspector General to Dep. Chief of Staff, Plans & Operations, and Lt. Gen. H. T. Wheless from Dep. Chief of Staff, Programs & Requirements, to Asst. Vice Chief of Staff.

Recent assignments to Hq USAF are: Maj. Gen. Seth J. McKee as Director of Plans, Office of Dep. Chief of Staff, Plans & Operations; Brig. Gen. Robert L. Petit as Dep. Dir. of Operational Requirements for Weapons Effect Testing, Office of Dep. Chief of Staff, Programs & Requirements; and Col. John French, as Dep. Dir. of Budget, Office of Comptroller of the Air Force.

Brig. Gen. Olbert F. Lassiter, Dep. Dir. of Operations for Strategic/Defense Forces, Office of Dep. Chief of Staff, Plans & Operations, Hq USAF, has retired. His replacement is Brig. Gen. Woodrow P. Swancutt.

The new Deputy for Reconnaissance at Headquarters, Aeronautical Systems Division, Air Force Systems Command, is Brig. Gen. William R. Yancey.

Brig. Gen. William G. Lee, Jr., will assume duty as Dir. of Plans and Program at Headquarters, Air Force Logistics Command, on March 1.

Maj. Gen. C. B. Root, formerly commander of Rome Air Materiel Area, Griffis AFB, N. Y., has assumed command of Mobile Air Materiel Area, Brookley AFB, Ala. He replaces Maj. E. B. Cassidy, who retired from active duty on Jan. 31. Replacing Gen. Root as commander of Rome Air Materiel Area is Col. George E. Harrington, who previously served as deputy commander of Rome AMA.

## U. S. Army Materiel Command Project Managers

PROJECT	PROJECT MANAGER	LOCATION	PHONE
ADVANCED AERIAL FIRE SUPPORT SYSTEM	Col. L. W. Leeney	Bldg. T-7 Rm 2072	OX 53840
AIRCRAFT WEAPONIZATION (XM-1, XM-2, XM-3, XM-5, XM-6, XM-22)	Col. N. L. Lindstrand, Jr.	Bldg. T-7 Rm G-429	OX 55112
CV-7A	Col. V. J. Layton	Bldg. T-7 Rm 2810	OX 72072
CHINOOK	Col. E. B. Bissell	Bldg. T-7 Rm 1704	OX 55113
FLATTOP	Lt. Col. J. F. Sullivan	Bldg. T-7 Rm G-814	OX 77467
INTERIM AIR DEFENSE SYSTEM	Col. E. P. Curtis	Bldg. T-7 Rm 2717	OX 78170
IROQUOIS (UH-1, HU-1)	Col. M. J. Krisman	Bldg. T-7 Rm 1543	OX 54890
LOH (OH-4, OH-5, OH-6)	Col. J. L. Gude	Bldg. T-7 Rm 2546	OX 72461
MAIN BATTLE TANK	Maj. Gen. W. G. Dolvin	Bldg. T-7 Rm 2537	OX 53724
MOHAWK (OV-1A, 1B, 1C)	Lt. Col. V. L. Ulery	Bldg. T-7 Rm G-443	OX 76686
SPECIAL WARFARE	Col. R. R. Lutz	Bldg. T-7 Rm 1056	OX 77010
M113 ITALY CO-PRODUCTION	Lt. Col. F. E. Abrino	Bldg. T-7 Rm 2533	OX 59009
(THE ABOVE OFFICES ARE LOCATED IN WASHINGTON, D. C.)			
CCIS-70	Col. G. P. Lerner	1925 N. Lynn St. Arlington, Va.	OX 44600
DESERET	Brig. Gen. J. A. Hebbeler	Deseret Test Center, Ft Douglas, Utah	355-6611 X-2111
SATCOM	Brig. Gen. J. W. Johnston	USA Satel- lite Com- munications Agency, Ft Monmouth, N.J.	532-9000 2-1228
NIKE-X	Col. I. O. Drewry	Missile Command, Huntsville, Ala.	876-2101 4271
HAWK	Col. G. McBride	Missile Command, Huntsville, Ala.	876-2101 5609
HERCULES	Col. R. M. Colquitt, Jr.	Missile Command, Huntsville, Ala.	876-2101 4813
LANCE	Lt. Col. W. E. Mehlinger	Missile Command, Huntsville, Ala.	876-2101 6144
MAULER	Col. B. R. Luczak	Missile Command, Huntsville, Ala.	876-2101 3201
PERSHING	Col. E. I. Donley	Missile Command, Huntsville, Ala.	876-2101 1165
REDEYE	Col. A. W. Reed	Missile Command, Huntsville, Ala.	876-2101 1327
SERGEANT	Col. J. M. Loomis, Jr.	Missile Command, Huntsville, Ala.	876-2101 6112

(Cont. on page 14)





### March 1965

International Symposium on CHEMILUMINESCENCE, March 30—April 2, at Army Research Office, Durham, N. C. Sponsor: Office of Naval Research. For information contact: Mr. Harry Fleisher, Office of Naval Research, Washington, D. C., telephone OXford 6-1854. UNCLAS-SIFIED.

### April 1965

Symposium in APPLIED MATHEMATICS ON MAGNETO-FLUID AND PLASMA DYNAMICS, April 12-15, at Waldorf-Astoria Hotel, New York, N. Y. Sponsors: Air Force Office of Scientific Research and Army Research Office, Durham, N. C. For information contact: Capt. J. Jones, Jr., Air Force Office of Scientific Research, (SRMA), Washington, D. C., telephone: OXford 6-1302. UNCLAS-SIFIED.

Fourth Symposium on ADVANCED PROPULSION CONCEPTS, April 26-28, at Palo Alto, Calif. Cosponsors: Air Force Office of Scientific Research and United Aircraft Corporation. For information contact: Maj. C. J. Donovan, Air Force Office of Scientific Research (SREP), Washington, D. C., telephone OXford 6-3742. SECRET.

## Aeronautical Systems Seminar Scheduled For Industry, March 23-25

Approximately 150 executives of the aeronautics industry will attend an Air Force-Industry planning seminar on aeronautical systems at Wright-Patterson Air Force Base, Ohio.

The seminar, March 23 to 25, will be keynoted by General Bernard A. Schriever, Commander of the Air Force Systems Command. Major General Charles H. Terhune, Jr., Commander of the Aeronautical Systems Division will be host.

A classified meeting, the seminar is designed to inform American industry of the Air Force's aeronautical systems future plans and policies, provide a background of planning information to assist industry in formulating its long-range corporate objectives, and to review with industry its assessment of its needs for long-range planning information.

The program will include briefings by the Department of Defense, Air Force, Air Force Systems Command, Aeronautical Systems Division, Research & Technology Division, and Aerospace Medical Division. The sessions will conclude with a panel assessment and recommendations. Representatives from all Military Services, National Aeronautics & Space Administration, and other

government agencies have been invited to participate.

Chairman of the Assessment panel will be Colonel M. A. Cristadoro, Jr., Deputy for Advanced Systems Planning, Aeronautical Systems Division. The general chairman of the seminar is Kenton W. Zahrt, Assistant for Innovation to Colonel Cristadoro.

Because the classified meeting facilities will limit the number of attendees, the results of the seminar will be published and made available to the entire industry on a need-to-know basis. Zahrt stated that the companies selected provide a representation of all segments of the aeronautics industry including major contractors, small businesses, and not-for-profit research organizations.

In making up the invitation list, attention also was paid to assuring that a cross-section of Air Force contractors was included, such as air-frame manufacturers, propulsion, electronics, chemical and others.

The seminar, one of a number directed by the Department of Defense, will follow a format outlined by Alexander H. Flax, Assistant Secretary of the Air Force for Research & Development. "These seminars," he said, "will last from three to five days with panels preparing plans covering specific areas of interest and developing recommendations for the Air Force and industry to follow in the planning process."

## Uniform Guidance On Security Classification Issued

A new comprehensive instruction issued by the Department of Defense (DOD Instruction 5210.47) will provide in one package uniform guidance, standards, criteria and procedures for security classification of official information.

The instruction applies throughout the DOD and also will provide the basis for classification activities in defense industry.

With the ultimate aim of reducing the quantity of classified

material and thereby facilitating the flow of scientific and technical information into non-defense activities, the instruction provides (1) that the signer or final approver of a document is responsible for necessity, accuracy and currency of the classification assigned; (2) that, with respect to material other than documentation, the supervisor at the lowest operational level at which material is produced is responsible for the necessity, accuracy, and

currency of the classification assigned; and (3) that systems be established which, without undue delay and in the normal course of business, will provide for reviews of the classification assigned.

Also of interest to industry is the emphasis which is placed on the necessity for detailed guidance for all programs and projects, identifying precisely the information which is determined to warrant security

(Cont. on page 16)

(Cont. from page 2)

• **Research.** The dialogue starts with the preparation by CNO of a GOR expressing operational needs. The GOR provides guidance for the issuance of NRRs by the Chief of Naval research, which establishes research projects and studies.

• **Exploratory development.** The GOR is also the basis for projects established at the exploratory development stage of the R&D cycle. Such projects originate in EDRs issued by CNM. (Once the project has progressed through these first two stages of the R&D cycle and shown promise of military usefulness and technical feasibility, it may proceed into the advanced development category or proceed directly either into engineering development or operational systems development.)

• **Advanced development.** If the project still has technical risks, or if it is doubtful as to whether or not it will have military value, the proper course might be for CNO to issue an ADO to place the project in the advanced development stage of the R&D cycle. This leads to the production of a set of hardware suitable for testing in an operational environment but not necessarily engineered for production. CNM's response to the ADO is the preparation of a TDP to achieve the objectives stated in the ADO.

• **Engineering development.** If, on the other hand, there is little doubt as to the technical feasibility or military value of the concept, the project may move directly to the engineering de-

In a decision dated Sept. 4, 1964, Judge Oren R. Lewis, U. S. District Court for the Eastern District of Virginia, held that a defense contractor which reports an alleged violation to DOD is protected by an absolute privilege against suits for slander and libel. An appeal from this decision was filed Oct. 22, 1964.

In *Becker v. Philco Corp.* (Civil Action #3081) and *Taglia v. Philco Corp.* (Civil Action #3082), the separated employees charged that statements made in the report by Philco to DOD were completely erroneous, malicious, slanderous and libelous. In approving summary judgment for the defendant corporation, Judge Lewis stated:

"Clearly persons performing governmental functions are shielded against the hazards of damage suits resulting from the performance of governmental functions. *Barr v. Matteo*, 360 U. S. 564 (1959); *Poss v. Lieverman*, 299 F. 2d 358 (2d Cir. 1962).

"The classified information here involved were state secrets.

## "Absolute Privilege" Protects Contractors In Court Case

"The conduct of the business of the Defense Department requires that it release classified information to its private defense contractors and in so doing it is mandatory that the United States protect itself against hostile or destructive activities by preventing unauthorized disclosure of classified information relating to the national defense.

"The Philco Corporation was such a defense contractor and as such was required by law<sup>1</sup> to report to the Defense Department any compromise or suspected compromise of classified information. In so reporting Philco was a link in the Government's overall system whereby classified information is protected. It was thus performing a governmental function.

"It is the occasion of the publication rather than the publication

<sup>1</sup> The Government's Security Regulations are authorized by statute. See *Greene v. McElroy* 360 U.S. 474.

(Cont. on page 15)

velopment stage in the R&D cycle. CNO initiates this action by issuing a TSOR which, in turn, causes the CNM to develop a PTA. The PTA gives CNO information on costs, potential military worth, alternatives, etc. he needs to arrive at a sound decision concerning the issuance of an SOR.

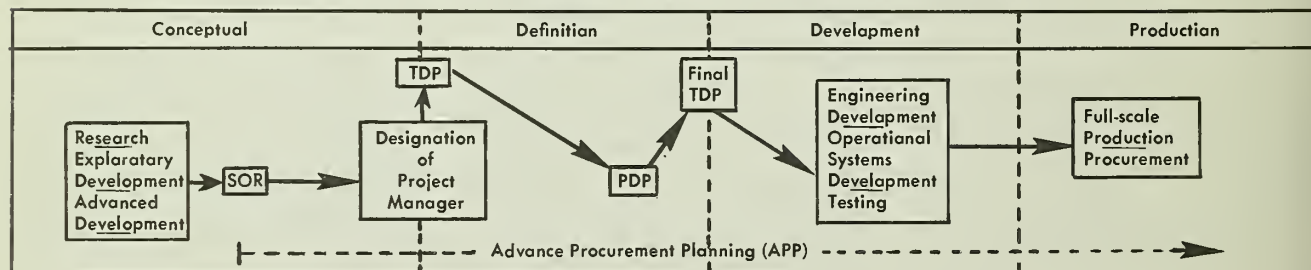
• **Operational systems development.** Issuance of the SOR by CNO is the final stage in requirements documentation by CNO. It puts the project into the operational systems development stage of the R&D cycle and triggers the preparation by CNM of

the TDP—the plan which becomes the basis for moving ahead with the Project Definition Phase (PDP) and with the development and testing which brings the project to the threshold of full-scale production.

Figure 3 places this article in chronological perspective and illustrates that Advance Procurement Planning has its roots in the R&D stages of the procurement process.

The foregoing is based on an article in the January 1965 issue of the Office of Naval Material Procurement Newsletter (NAVEXOS P-2182).

Figure 3. The chronological stages of the procurement process.







## BIBLIOGRAPHY

The following publications released by the Defense Department and its component agencies may be of interest to the defense industry:

*DOD Instruction 5210.47, "Security Classification of Official Information," Dec. 31, 1964.* Provides guidance, policies, standards, criteria and procedures for the security classification of official information under the provisions of Executive Order 10501, as amended, for uniform application throughout the DOD, the components of which, in turn, through their implementation of this instruction, shall accomplish its application to defense contractors, sub-contractors, potential contractors, and grantees. Determinations whether particular information is or is not Restricted Data are not within the scope of this instruction.

*DOD Directive 1442.4, "Procurement of Temporary and Intermittent Services of Experts and Consultants," Jan. 11, 1965.* Prescribes general regulations governing the employment of individual experts, consultants, and part-time advisory personnel in the DOD, including the procurement of individual services by contract.

*DOD Instruction 7720.12, "Defense Contractor Cost Reduction Program," Jan. 18, 1965.* Describes procedures and format for reporting and validating the cost reduction achievements of contractors participating in the Defense Cost Reduction Program. It explains how a DOD Cost Reduction Monitor will conduct a qualitative review of a contractor's program, how a validation report will be processed to a central data bank, and how the information will be used.

DOD directives and instructions may be obtained from:  
Publications Distribution Branch  
Office of the Secretary of Defense  
Room 3B938, The Pentagon  
Washington, D. C. 20301

*Defense Procurement Circular No. 20, Dec. 18, 1964.* Amendment of DPC No. 6—Rights in Technical and Other Data and Copyrights; Extension of Mandatory Date of Standard Forms; and Equal Opportunity.

*Defense Procurement Circular No. 21, Dec. 28, 1964.* Clarification of Project Definition Phase (PDP) Regarding Technological Advancement and Specifications; Dissemination and Effective Dates of the ASPR, Its Revisions, and the Defense Procurement Circulars; and Conforming Definition in Special Test Equipment Clause in ASPR Paragraph 13-705 to Corresponding Paragraph 13-101.6.

Each Defense Procurement Circular (DPC) is designed to place new or changed policies or procedures in effect prior to publication of an Armed Services Procurement Regulation (ASPR) revision. The items in each circular are canceled after six months, unless specifically eliminated earlier by a new DPC or by publication in the ASPR. ASPR subscribers will receive Defense Procurement Circulars through the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

*U. S. Air Force Office of Aerospace Research (OAR) Quarterly Index of Current Research Results, July 1–Sept. 30, 1964.* Designed to (1) identify all technical reports produced and published by various OAR organizations during quarter indicated; (2) provide record of results of research conducted and sponsored by each OAR organization; and (3) furnish a ready reference for identification of technical reports produced by particular authors or contractors, under certain contracts, grants or projects.

*Author's Guide for Technical Reporting (OAR 64-8), July 1964.* Presents simple rules and suggestions

for authors of OAR-sponsored scientific reports. Its contents are consistent with the majority of guides used by professional journals and with current rules and directives of DOD and U. S. Air Force.

*U. S. Air Force Office of Aerospace Research 1964 Annual Report (OAR 64-15).*

*U. S. Air Force Achievements in Research.* A presentation of one hundred accomplishments selected to reflect the scope and quality of the OAR research program.

Agencies of the DOD, qualified contractors and other government agencies may obtain copies of the OAR publications listed above from:  
Defense Documentation Center  
Cameron Station  
Arlington, Va. 22314

*United States Army in World War II, Special Studies, Buying Aircraft: Materiel Procurement for the Army Air Forces.* The book offers the reader a liberal education in military procurement as it was practiced between the two World Wars and during World War II. Because this volume offers concrete examples of problems involved in design and purchase of complicated items of military equipment, it should prove useful for those currently engaged in procurement of missiles and aircraft as well as to students of logistics.

Catalog No. D 114.7: Ai7 Cloth, \$4.75

*The New Four Ocean Challenge.* Describes the four ocean challenges of the future and how we should prepare to meet them. Tells about the responsibilities of our Navy and Marine Corps in war or peace.

Catalog No. D 201.2: Oc 2 35¢

Publications that require remittance are available for purchase at U. S. Government Printing Office, Washington, D. C.

# FROM THE SPEAKERS ROSTRUM



Honorable Eugene G. Fubini

Excerpt from address by Hon. Eugene G. Fubini, Asst. Secretary of Defense (Dep. Dir., Defense Research & Engineering), before a Meeting of the Association of the U.S. Army.

\* \* \* \* \*

## Trends in Defense Research & Development

One of the missions of my office, as I see it, is to bring harmony to the requirements established by the Services, and to the development and procurement of equipment and weapons to meet these requirements. This has to be done without changing the character of the Service, without destroying its esprit, its traditions, and its personality which are so important. But it must be done so that a man in one airplane can recognize and talk to a compatriot in another, so that the ammunition provided to a Marine will fit the rifle of an Army man who is fighting in the same Unified Command or Joint Task Force, so that the radios of the Marines are compatible with those of the Army units on their flanks.

It is also easy to see that it is not an easy task to convince enthusiastic supporters in each Service that a single type of equipment will meet their requirements and that three different types are not necessary. But the job must be done. For example, the Army, the Marines, and the Air Force each have different systems for the control of aircraft in the tactical area. But there is no difference between these areas. It has been found very difficult to teach an Army radar not to plot on the radar scope an Air

Force aircraft. Thus, differences in equipment intensify doctrinal problems. The Marines want a type of modulation in the VHF that is not compatible with the radios the Army is procuring. The Army man on the ground cannot use his own radio to communicate with the Air Force man who is providing him close support; he needs an Air Force radio. I cannot believe that anyone would disagree about the need for a change: we must promote useful duplication in development but we must prevent it in procurement. The magnificent fighting spirit of the Marines should not be influenced by a decision that their VHF radios should use the same modulation that the Army uses. It seems to me that it makes as little sense to have two different types of hardware to do air traffic control in the battlefield as it would to create two separate FAA's, one for a propeller driven aircraft and one for jets.

Still, our decisions are seldom popular. Often members of the Army ask themselves how we can disapprove a proposal the merits of which are so obvious. The fact of the matter is that in many cases they have not looked around at the Navy and the Air Force; but we must look. The dialogue between the Services and our offices has been slow in getting established but is now going on with intensity and continuity.

One of the purposes of this short talk is to promote the dialogue, to explain our motives, to promote communication and exchange of ideas.

The Services are the source of our strength but, since a centralizing group is unavoidable, we must establish a climate where we can trust and are trusted. We must try not to justify mistrust; we must recognize that honest disagreements are unavoidable but it is necessary that on both sides the climate of trust be promoted . . .

## New Technologies Create Problems

Now let me talk a moment about a problem that we engineers have created for ourselves. In the early

years of World War II and right after its end, the scientists and engineers had a difficult time convincing the operators that the new technologies had much to offer. Thus the engineers established a non-organized, albeit very effective, sales campaign. They were successful, very successful, too successful. The number of vacuum tubes or of transistors in a system, once counted in the hundreds, climbed to the thousands, and is now in the millions, the tens of millions.

Looking over what we have created many of us have become very apprehensive about the creature we generated. And we are reversing the trend. I invented the American Syndrome joke that says, "If you can do it, do it; it does not matter if it is really not necessary, if it costs a lot, takes a long time to build, weighs too much, if it can be done we should do it." If one asks: Why did you specify 3000 miles as the range of your satellite detector radar and not say 4000 miles or 2000; the answer is certain: We specified 3000 miles because we thought that the state-of-the-art permits it. It must be obvious to you why we engineers should worry; if we build at the extremes of our capability we will not have practical solutions.

And thus we have another reason for concern. We have convinced the operational people so well that in many cases we must say:

Please take it easy: if your air defense tactical sector is designed this way it will require ten million transistors or diodes; it may well work, but if each transistor lives 100 years or about a million hours there will be a failure in average every few minutes. Of course the design can be modified to increase the reliability but this serves to increase the complications. Unfortunately our colleagues in the contractors' plants do not assist us too much in this trend and so we are beginning to see a problem in which the situation of earlier years is reversed. The government technologists are the conservative ones, the military are the bold ones. Let me use this platform to issue a plea: remem-



ber that the very best, even if feasible, will not stay feased.

The second best will cost too much, take too long, require too much logistic support.

Take the third best; it will work and keep working.

And to the operational people, we ask for understanding and help to prevent project terminations and delays; our worry is not about the cost of the termination but the fact that any false start continues a military situation where our forces instead of being equipped with the first or second best remain equipped with the last worst . . .

\* \* \* \* \*



Gen. Earle G. Wheeler, USA

Excerpt from an address by Gen. Earle G. Wheeler, USA, Chairman, Joint Chiefs of Staff, at Annual Printing Week Banquet, Philadelphia, Pa.

\* \* \* \* \*

### Planning and Controlling Major Defense Programs

The heart of the defense cost analysis system is comparison—evaluating the costs of goods and services bought with the results achieved in terms of military effectiveness. Although intangibles and difficult judgements are usually involved as well as hard facts, this analytical process assists materially in determining if the expense involved is worthwhile. The hunch better on a horse race is a rare winner; the careful, objective analyst has a better chance of making a few dollars. The surest way to lose is to bet on every entry. In the field of defense we have many projects and systems demanding support. By analysis, we try to eliminate those of least promise of being winners . . .

(Our Five-Year Force Structure and Financial Program) comprises a comprehensive system for planning and controlling major defense programs at the highest levels. It also permits an orderly transition from one stage of a program to the next so

that "wheel spinning" is held to a minimum.

The program accomplishes these objectives because it is mission-oriented rather than being based on the desires of a particular Service. By that I mean that it breaks out the military force structure—that is, the numbers of troops, where they are deployed, and the types of individuals and equipment involved—into categories based on mission; for example, Strategic Retaliatory Forces, Continental Air and Missile Defense Forces, General Purpose Forces, Airlift and Sealift Forces, and so forth. This is much more meaningful in this era when any sizable conflict will require the integrated employment of forces of all services—land, air and sea—than using such categories as Army Forces, Navy Forces, Air Force Forces, and Marine Corps Forces as we did in the fairly recent past. Within these mission categories, it provides for complete packages of forces—multiservice, if appropriate—to do particular jobs.

The program also deals with the input of resources—manpower, equipment, and installations, together with their costs—and relates them to the outputs or the end products—such as Strategic Retaliatory Forces—so that a certain input will provide a certain output.

The program also coordinates long-range military planning with short-range detailed budgeting by projecting the detailed programs five years into the future. Finally, it provides for a continuing appraisal and control of the progress of individual projects through a system of progress reporting, and it furnishes physical and financial data in forms suitable for making cost effectiveness studies of alternative courses of action.

In fact, the system is the only one which ties all facets of the defense effort together. It does this by relating national security objectives to strategy, then tying strategy to the forces required, forces to resources, and resources to costs—all within the same conceptual framework and all projected several years into the future. You might say that it provides the decision maker with the great advantage of permitting him to see how big a poker game he is getting into before he buys his first stack of chips.

\* \* \* \* \*

### New High-Thrust Test Facility

A new capability for test firing advanced rocket propulsion systems—with increased efficiency — was recently announced by the Air Force Systems Command's Research & Technology Division (RTD). The new test capability is being added to RTD's Air Force Rocket Propulsion Laboratory with the current construction of an \$8 million rocket test stand at Edwards Air Force Base, Calif.

The test stand, with unusually flexible features, differs from other test stands in that it is designed to test fire large solid rocket motors in either vertical or horizontal positions. Liquid rocket engines can also be fired from a horizontal position. The test stand's instrumentation system incorporates features which make it adaptable to a wide range of tests.

The installation's interchangeable features were designed to cut costs and still provide a wide range of testing capabilities within a single facility. It includes dual-purpose vessels which can handle either cryogenic or storable rocket propellants.

### New Naval District Established

Effective January 1, 1965, the Potomac River and Severn River Naval Commands were merged and became the Naval District Washington (NDW). No changes or reduction in personnel, military or civilian, are contemplated.

Geographically the consolidation means that the Potomac River Naval Command, with headquarters in the Washington Navy Yard, will be expanded to include Anne Arundel County, Md., once the boundaries of the Severn River Naval Command.

The Commandant of Naval District Washington, D. C., is Rear Admiral Andrew J. Hill, USN, past Commandant, Potomac River Naval Command.

Within the NDW are some of the Navy's largest research and development centers, including the Naval Research Laboratory, which pioneered the development of radar; the David Taylor Model Basin, which is the world's largest facility for testing ship and aircraft design; the National Naval Medical Center, which

(Cont. on page 14)

## Atomic Support Agency

(Cont. from page 3)

tually unchanged until July 1, 1964.

### Central Coordinator For Nuclear Weaponry

Under the military command of the Secretary of Defense, the DASA coordinates DOD nuclear weapons programs at the national level. This responsibility includes the maintaining of close liaison with the AEC, the military and other governmental agencies concerned with nuclear weapons. Additional field and laboratory activities are conducted through three major subordinate commanders.

The largest of these elements, Field Command, DASA, is the agency's primary operational command, with headquarters at Sandia Base. Presiding over the Field Command is a Deputy Director of DASA. Directly under him are two Assistant Deputies, one for Weapons and Training, the second for Support. Also under Field Command supervision are the National Stockpile Sites, scattered through the country.

Another arm of DASA is Joint Task Force EIGHT (JTF 8), staffed by the three Services. Operating under DASA control, JTF 8 will plan and conduct overseas nuclear tests, if and when such tests are required and authorized. In this event, operational control will pass from DASA to the Joint Chiefs of Staff, with the Commander of JTF 8 being designated as senior AEC representative in the test area.

The third major subordinate element of DASA is the Armed Forces Radiobiology Research Institute. This nuclear reactor facility in Bethesda, Md., conducts advanced study and research on biomedical effects of radiation.

#### Weapons Development: A Major DASA Function

In pursuing its primary mission, DASA supports the Secretary of Defense, Joint Chiefs of Staff, Defense Department components and the Military Services in all matters concerning nuclear weapons, including their planning and development

High on the list of these functions

is that of reporting on the status of weapons development, production, modifications, stockpiling and retirement to the Department of Defense and the Joint Chiefs. DASA also advises on the preparation of long-range requirements for weapons, and these reports are later submitted to the AEC for its guidance.

The AEC, in turn, performs the basic research and development of nuclear components, basing its designs on military requirements. DASA, however, determines final military characteristics, taking into consideration the needs of the Services concerned. For the sake of versatility, as many of these varied needs as possible are incorporated into a single weapon.

Following close behind basic weapons development itself, development of safety and security features of these weapons is of paramount concern to DASA. Working with individual Services and the AEC, DASA establishes design requirements for effective safety mechanisms.

#### Supervision Of Nuclear Effects Tests

What happens as a result of nuclear explosions is of primary concern to the defense establishment, especially in the preparation of operational plans. DASA, in addition to planning and conducting DOD weapons effects tests, collects, analyzes, evaluates and disseminates the resulting data.

This information is gathered from field testing, theoretical studies, laboratory experiments and simulation. In addition to preparing the basic nuclear weapons effects test program for submission to DOD, DASA also renders technical assistance to the Joint Chiefs in evaluating the test results.

Additional responsibility has been assigned DASA for the operation and security of the National Stockpile Sites, to include advising the individual Services on the construction and operation of their own storage sites. To the commanders of the unified and specified commands, DASA provides basic logistics advice concerning atomic weapons for forces assigned to them.

DASA also insures weapon quality and reliability through the scheduling of modifications, modernization and quality assurance sampling.

Other DASA functions include the preparation and administration of

training programs for military and civilian personnel. These vary from less than a day to a two-year technical course leading to a graduate degree. All are designed to assist the Services in nuclear weapons training. Many of these courses are conducted at the agency's Sandia Base facilities. Others are offered by traveling teams that visit overseas commands. The graduate training program is given by the University of Rochester (New York), at the Naval Postgraduate School and at selected DOD and AEC installations.

#### Personnel Assigned To DASA

##### Director:

Lt Gen H. C. Donnelly, USAF  
Executive Officer:

Col D. G. Williams, USA

Comptroller:

Capt J. P. Gore, USN

Public Information Officer:

Lt Col J. H. Dickson, Jr., USA

##### Dep. Director,

##### Operations & Administration:

Brig Gen K. F. Dawalt, USA

##### Operations Division:

Col W. M. Shankle, USAF

##### Plans Division:

Col E. W. Bowen, USA

##### Security Division:

Col N. A. Skinrood, USA

##### Logistics Division:

Col J. E. Minahan, USA

##### Requirements Division:

Col W. K. Benson, USA

##### Personnel & Administration:

Col H. E. Morrill, USAF

##### Dep. Director, Scientific:

Dr. T. B. Taylor, Civilian

##### Radiation Division:

Col H. C. Rose, USAF

##### Medical Division:

Col G. E. Hekhuis, USAF

##### Blast & Shock Division:

Col G. E. Hesselbacher, Jr., USA

##### Analysis & Programs Division:

Col C. S. Brice, Jr., USA

##### Weapons Test Division (Sandia):

Col D. I. Prickett, USAF

##### Dep. Director, Commander,

##### Field Command:

RAdm Ralph C. Johnson  
Commander,

##### Joint Task Force EIGHT:

Maj Gen John B. Stevenson,  
USAF

##### Director, Armed Forces Radiobiology Research Center (AFRRI):

Col James I. Brennan, USA



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FEBRUARY 1965							MARCH 1965							APRIL 1965											

## SPEAKERS CALENDAR

### OFFICE OF THE SECRETARY OF DEFENSE

Hon. Eugene G. Fubini, Asst. Secretary of Defense (Dep. Dir. of Research & Engineering), at Aerospace Writers Assn. Meeting, Washington, D.C., Feb. 25.

Mr. Peter Solbert, Dep. Asst. Secretary of Defense (International Security Affairs), at Southern Methodist Univ., Dallas, Tex., Feb. 27.

### ARMY

Hon. Willis M. Hawkins, Asst. Secretary of the Army (Research & Development), at Harvard Univ., School of Business Administration, Boston, Mass., March 4.

Maj. Gen. G. V. Underwood, Jr., Chief of Information, Department of the Army, at Assn. of U.S. Army Chapter Meeting, Milwaukee, Wis.,

March 18; at Forrestal Memorial Dinner, Washington, D.C., March 25, (appearance only); at Advertising Club Luncheon, Louisville, Ky., April 16.

### NAVY

VAdm. C. B. Martell, Executive Dir. of Anti-Submarine Warfare Programs, Office of Asst. Chief of Naval Operations (Intelligence), at National Security Industrial Assn. Dinner, Ft. Taylor, Key West, Fla., Feb. 25.

### AIR FORCE

Hon. E. M. Zuckert, Secretary of the Air Force, at Industrial Round Table, Washington, D.C., March 3; at Goddard Memorial Dinner, Washington, D.C., March 19, (appearance only).

Hon. L. Marks, Jr., Asst. Secretary of the Air Force (Financial Manage-

ment), at Economic Society Meeting, Miami, Fla., March 15.

Brig. Gen. H. J. Sands, Jr., Commander, Ballistic Systems Div., AFSC, at Jonathan Club Meeting, Los Angeles, Calif., March 18.

Maj. Gen. B. I. Funk, Commander, Space Systems Div., AFSC, at Chamber of Commerce Meeting, Denver, Colo., March 19.

Gen. J. P. McConnell, Chief of Staff, U.S. Air Force, at Base Anniversary Celebration, Little Rock AFB, Ark., March 21.

Maj. Gen. R. L. Bohannon, The Surgeon General, U.S. Air Force, at Pharmaceutical Wholesalers Meeting, Las Vegas, Nev., March 23.

Maj. Gen. R. E. Ruegg, Asst. Dep. Chief of Staff, Systems & Logistics, Hq USAF, at National Security Industrial Assn. Meeting, Washington, D.C., March 25 (appearance only).

## Industry Reviews Stock Numbers Cross-Referencing

Acceptance by defense contractors of invitations to participate in a program to review manufacturers' part numbers that are cross-referenced with Federal Stock Numbers has been gratifying, the Defense Supply Agency (DSA) recently announced. The program is voluntary and on a nonreimbursable basis.

Although the review process by manufacturers is complex and time consuming, the response has thus far been excellent in the number of validated lists of reference numbers received from participating industrial concerns.

Known as Project MAVERIC (Manufacturers' Assistance in

Verifying and Editing Reference Identification for Cataloging), the object of the program is to validate, correct, add or withdraw obsolete manufacturers' numbers from Federal Catalog records, and to eliminate "no-user" and duplicate Federal Stock Numbers from the catalog system.

MAVERIC was originally limited in DSA to participation by the Defense Logistic Services Center, Battle Creek, Mich.; and the Defense Industrial Supply Center, Philadelphia, Pa.; and to 11 manufacturers. Later, the Defense General Supply Center, Richmond, Va.; the Defense Construction Supply Center, Columbus, Ohio; the De-

fense Electronic Supply Center, Dayton, Ohio; and 13 additional manufacturers became participants.

The project will benefit industry through assurance that its current part numbers are accurately cross-referenced to Federal Stock Numbers.

The government will also benefit in that only validated manufacturers' numbers are in the catalog, plus the fact that a single Federal Stock Number will identify an identical item regardless of the manufacturer. There will also be a greater amount of information available on items which can be interchanged or substituted for each other.

## Data System Information Will be Standardized

In an era when the rapid interchange of information is becoming more and more essential, computer installations must be able to "talk" to each other. The defense establishment, with 1,100 computers processing data of various kinds, has recognized this problem and is doing something about it.

Spurred on by Deputy Secretary of Defense Cyrus Vance, a new system of standardized information programming is to be phased into use throughout the defense establishment. Transition will be gradual so as to cause minimum problems, but eventually all DOD-associated computer systems will be programmed by the same coding system. As a result of this common "language," these systems will be able to interchange information and data far faster than at present.

The importance of such an information interchange capability became apparent with the advent of the National Military Command System (NMCS). The NMCS is the command post for the National Command Authorities — the President, Secretary of Defense and Joint Chiefs of Staff—and the focal point for strategic operations. As a result it is called upon to handle data from various world-wide organizations, each with its own system of computer information input coding.

Under these separate systems, for instance, one installation might encode "Air Force" as "J," while another encodes it as "Q." Before there can be any interchange of information between the two computers, such information first must be "translated" from one set of symbols to the other. This is a costly and time-consuming task.

Assistant Secretary of Defense (Comptroller) Charles J. Hitch has been assigned responsibility for implementing this program.

## New Navy District

(Cont. from page 11)

provides the most progressive medical facilities in the Navy; the Naval Air Test Center, Patuxent River, Md., which tests Navy planes before they are accepted for Navy-wide use; the U. S. Naval Weapons Laboratory; and the U. S. Naval Space Surveillance System at Dahlgren, Va.

## Army Project Officers

(Cont. from page 6)

SHILLELAGH	Lt. Col. R. M. Pearce	Missile Command, Huntsville, Ala.	876-2101 8171
TOW	Lt. Col. B. B. Small, Jr.	Missile Command, Huntsville, Ala.	876-2101 5185
AACOMS	Lt. Col. H. W. Runft (Acting)	Electronics Command, Ft Monmouth, N. J.	532-9000 5-2853
AN/VRC-12 AN/PRC-25	Col. J. Schofield	Electronics Command, Ft Monmouth, N. J.	532-9000 5-2249
MQM-58A	Col. D. P. Gallagher	Electronics Command, Ft Monmouth, N. J.	532-9000 5-1926
RADAS	Col. D. R. Guy	Electronics Command, Ft Monmouth, N. J.	532-9000 5-2348
UNICOM/STARCOM	Col. H. F. Foster, Jr.	Electronics Command, Ft Monmouth, N. J.	532-9000 5-1930
GENERAL PURPOSE VEHICLES (Trucks: ¼ T M151; ¾ T M37; 2½ T M44; 5 T M39)	Col. F. L. Havel	Mobility Command, Warren, Mich.	526-1380 X-520
GENERATORS	Col. E. B. Warner	Mobility Command, Warren, Mich.	536-1380 X-601
XM-561	Maj. R. L. Berquist	Tank-Automotive Center, Warren, Mich.	536-1380 X-638
SELECTED AMMO	Col. R. S. Crossman	Munitions Command, Dover, N. J.	Foxcroft 1-2100 X-3230
M-60 TANK (M-48A3 TANK)	Col. W. L. Drennan	Mobility Command, Warren, Mich.	536-1280 X-519
RIFLES	Lt. Col. H. W. Yount	Weapons Command, Rock Island, Ill.	788-8411 X-5546
COMBAT VEHICLES (105mm SP How., M108 155mm SP How., M109 Cmd & Rcn Carr., M114 AIFV)	Col. T. W. Davis, III	Weapons Command, Rock Island, Ill.	78-8411 X-6626
SHERIDAN	Col. Paul A. Simpson	Weapons Command, Rock Island, Ill.	788-8411 X-6734

## SPECIAL ASSISTANT TO COMMANDING GENERAL FOR PROJECT MANAGEMENT:

Col. J. L. Lewis, Bldg. T-7, Rm. 1730, OXford 57945  
OFFICE OF PROJECT MANAGER STAFF OFFICERS:  
Mr. Carl Black, Admin. Asst., Bldg. T-7, Rm. 2645, OXford 55580  
Wash., D. C.



## NOTES FOR EDITORS

Featured below are a number of items about interesting projects within the Department of Defense which can easily be expanded into articles for house organs and trade magazines. Any editor who desires further information, pictures or interviews on any of these subjects is invited to contact the Magazine & Book Branch, Office of the Assistant Secretary of Defense for Public Affairs, Room 20757, The Pentagon, Telephone: OXford 78010, 78031, or 78034. This office is prepared to meet your request for *any* information concerning the DOD and its component parts.

\* \* \*

### ARMY'S ATOMIC CLOCK

A lightweight atomic clock which marks the time down to a ten billionth of a second has been developed for the Army by General Technology Corp., Torrance, Calif. In contrast to many models of atomic clocks weighing hundreds of pounds, the new clock weighs 44 pounds and occupies only about one cubic foot—a package manageable by one man and rugged enough for field use. This atomic clock depends on the resonance of the natural element rubidium for its accuracy and stability, measured by the gain or lag of only one second in about 300 years.

\* \* \*

### AIR FORCE'S ELECTRONIC FENCE

In early 1964 the lives of three American flyers and two U.S. aircraft were lost after an inadvertent penetration of Communist airspace over East Germany. During November 1964, an "electronic fence in the sky" between Western Europe and the Communist nations was constructed and is now in operation. Completed in six months by dismantling, moving and reactivating ground control intercept radar stations at new border locations, the radar "fence" will provide positive location checks of all aircraft. Major management and transportation obstacles were overcome in the relocation.

### NAVY, AIR FORCE TEST ION ENGINES

A successful 30-minute ballistic flight test of an Air Force ion engine in space has cleared the way for the first orbital test of an electrical propulsion system this spring. The ion engine will be teamed with AEC's SNAP-10A nuclear reactor power supply aboard an Agena satellite which will be launched by an Atlas SLV-3 booster. In addition, in 1965 the Navy plans to flight test for the first time a plasma pinch ion engine satellite in space. Telemetered data on acceleration, propellant consumption and pressure, spin rate and voltages will be recorded on the ground so that the thrust, specific impulse and reliability of the engine can be determined.

Ion rockets are extremely low-thrust devices which eject a stream of charged particles to propel space vehicles over vast distances at speeds as great as 100,000 miles per hour. On deep penetration space missions, ion rockets can travel faster than chemical rockets in addition to carrying a far greater payload.

\* \* \*

### NAVY CONTINUES DEEP SUBMERGENCE PROJECTS

A second phase of the Navy's continuing probes into the depths of the seas has been planned. The project will be an extension of last summer's Operation Sea Lab I which tested man's ability to live at 392 feet beneath the ocean's surface for prolonged periods. Sea Lab II will be deeper and involve more aquanauts than Sea Lab I. The plans for this operation are firm with August the target date.

\* \* \*

### LINDBERG'S BUTTER

A life-saving burn ointment has been credited with reducing the mortality rate by more than 40 per cent among patients with burns over 30 to 60 per cent of their bodies. The buttery consistency of the new ointment allows it to be applied directly to the burn. No dressing is used. Its

content of sulfonamide fights off a wide variety of bacteria and allows the wound to heal without infection. The ointment was developed by the Surgical Research Unit at the Brooke Army Medical Center, Ft. San Houston, Tex. The ointment's nickname honors Colonel Robert B. Lindberg, Chief of the Research Unit's Bacteriology Branch.

### Absolute Privilege

(Cont. from page 8)

itself which is determinative of whether or not it is entitled to absolute privilege. Here the occasion was compliance with government security regulations enacted for the protection of state secrets. *Barr v. Matteo, supra; Preble v. Johnson, 275 F. 2d 275 (10th Cir. 1960)*

"Further, the communication sued upon was circulated only in closely restricted channels. It was not available to anyone except upon a 'need to know' basis and has not been published or otherwise made available to the public.

"To subject Philco, in performing its duty of reporting the compromise, or suspected compromise of classified information to the Department of Defense, to 'the burden of a trial and to the inevitable danger of its outcome would,' in the language of Judge Learned Hand, 'dampen the ardor of all but the most resolute, or the most irresponsible, in the unflinching discharge of their duties. See *Gregoire v. Biddle, 177 F. 2d 579.*"

In an opinion rendered Oct. 28, 1963, the Circuit Court of the County of Arlington, Commonwealth of Virginia, earlier reached the same result as to the deputy security officer who brought the matter originally to the attention of the Corporation Security Officer.

Knowledge of these two decisions may be of interest and assistance in the conduct of field investigations and administration of the security program.

# CALENDAR OF EVENTS

March 1-3: American Management Assn. Data Processing Conference, New York, N. Y.

March 2-4: American Legion National Rehabilitation Conference, Washington, D. C.

March 9: Armed Forces Management Assn. Luncheon, Navy Yard Annex Officers Club, Washington, D. C. Speaker on "Defense Industry Management," T. A. Smith, Exec. Vice President, Radio Corp. of America.

March 8-10: American Institute of Aeronautics & Astronautics (AIAA) U. S. Navy Marine Systems & Anti-submarine Warfare Conference, San Diego, Calif. Sponsor: AIAA (W. H. Arata Jr., Northrop Corp., 9744 Wilshire Blvd., Beverly Hills, Calif.). Navy coordinator: Office of Naval Material (MAT 32), Washington, D. C.

March 9: 23rd Anniversary of U. S. Army Transportation Corps.

March 9-10: Symposium on Disarmament and Arms Control, Los Angeles, Calif. Sponsor:

American Ordnance Assn. Participants: Representatives of Univ. of Michigan, Institute of Defense Analysis, and DOD. Attendance will be from industry, academic world and Armed Forces.

March 11: Industrial Procurement Conference, Oakland, Calif. Sponsor: Local Chamber of Commerce. DOD coordinator: Defense Supply Agency. Navy Coordinator: Inspector of Naval Material, San Francisco, Calif.

March 15-20: Annual Conference and Corrosion Show, at Chase Park Plaza Hotel, St. Louis, Mo. Sponsor: National Assn. of Corrosion Engineers (T. J. Hull), 1061 M&M Bldg., Houston, Tex.

March 30-April 2: National Petroleum Refiners Association Conference, Houston, Tex.

April 20-23: Sea-Air Space Exposition, Washington, D. C. Sponsor: Navy League (RAdm. Ralph Whitner, USN-Ret.). Navy Coordinator: Office of Chief of Information (Cdr. E. Holmguaard).

## New Security Film Explains Spy Methods

A new industrial security training film, "Enemy Agent and You," is available at major U.S. Army Audio-Visual Centers throughout the United States. The film portrays methods used by enemy intelligence agents to obtain information they believe to be of value as "classified defense information."

Defense contractors desiring to show this film may obtain it on a loan basis from their cognizant DOD Security Office.

## Security Classification

(Cont. from page 7)

classification. This will give further meaning to the clearly stated provision that classification of physical things such as hardware, equipment and the like are classified only to the extent necessary to protect from unauthorized disclosure classified information contained in or revealed by the physical object.

A paragraph, covering the classification of privately owned information, points out that classification would not be proper unless Government has exercised control, in whole or in part, or has established a proprietary interest in the information. Attention is invited, however, to the fact that the private owner who believes his information requires security protection should protect it on a personal basis while seeking advice from Army, Navy, or Air Force.

The Navy's second nuclear powered guided missile frigate, TRUXTON, was launched at the New York Shipbuilding Corp., Camden, N.J., in December. The ship, shown here in an artist's drawing, will join the fleet in early 1966. It will be armed with one twin Terrier surface-to-air missile launcher, one 5-inch 54 caliber gun mount, two 3-inch 50 caliber rapid fire guns, anti-submarine rockets, four rocket launchers and DASH (Drone ASW helicopter). TRUXTON will also be equipped with bow mounted long range sonar and the Navy tactical data system.





**Department of Defense  
FINANCIAL SUMMARY**

(Billions of Dollars)

	FY 1961	FY 1962		FY 1963	FY 1964	FY 1965	FY 1966
		Original	Final				
Strategic Retaliatory Forces.....		7.6	9.0	8.4	7.3	5.3	4.5
Continental Air and Missile Defense Forces.....		2.2	2.3	2.0	2.1	1.8	1.8
General Purpose Forces.....		14.5	17.4	17.6	17.7	18.1	19.0
Airlift/Sealift Forces.....		.9	1.2	1.4	1.3	1.5	1.6
Reserve and Guard Forces.....		1.7	1.8	1.8	2.0	2.1	2.0
Research and Development.....		3.9	4.2	5.1	5.3	5.1	5.4
General Support.....		11.4	12.1	13.0	13.7	14.3	14.6
Retired Pay.....		.9	.9	1.0	1.2	1.4	<sup>a</sup> 1.5
Military Assistance.....		1.8	1.8	1.6	1.2	1.2	1.3
<b>Total Obligational Authority <sup>b</sup>.....</b>	<b>46.1</b>	<b>44.9</b>	<b>50.8</b>	<b>51.9</b>	<b>51.9</b>	<b>50.9</b>	<b>51.7</b>
Less Financing Adjustment.....	3.0	1.3	1.4	.8	.9	1.1	3.2
<b>New Obligational Authority.....</b>	<b>43.1</b>	<b>43.7</b>	<b>49.4</b>	<b>51.1</b>	<b>50.9</b>	<b>49.7</b>	<b>48.6</b>
Adjustment to Expenditures.....	+1.6	+1.0	-1.2	-1.1	+3	-.4	+4
<b>Total Expenditures.....</b>	<b>44.7</b>	<b>44.7</b>	<b>48.2</b>	<b>50.0</b>	<b>51.2</b>	<b>49.3</b>	<b>49.0</b>
<b>TOA by Department and Agency</b>							
Department of the Army.....	10.4	10.4	12.5	12.0	12.5	12.0	12.4
Department of the Navy.....	12.7	12.4	14.8	14.9	14.8	14.7	15.3
Department of the Air Force.....	19.9	18.5	19.7	20.6	20.3	19.4	18.9
Civil Defense.....	—	—	.3	.1	.1	.1	.2
Defense Agencies/OSD (excluding Retired Pay and Family Housing).....	.3	.4	.3	.9	1.1	1.2	1.3
Retired Pay.....	.8	.9	.9	1.0	1.2	1.4	<sup>a</sup> 1.5
Defense Family Housing <sup>c</sup> .....	.5	.5	.5	.7	.7	.7	.7
Military Assistance.....	1.5	1.8	1.8	1.6	1.2	1.2	1.3
<b>Total <sup>b</sup>.....</b>	<b>46.1</b>	<b>44.9</b>	<b>50.8</b>	<b>51.9</b>	<b>51.9</b>	<b>50.9</b>	<b>51.7</b>
<b>MEMO: Increases since FY 1961 in payments to retired personnel and in rates of compensation included above:</b>							
Increased Compensation Rate:							
Military.....		—	—	.1	1.2	1.6	1.6
Civilian.....		—	—	.2	.3	.6	.6
Increased Payments to Retired Personnel.....		.1	.1	.2	.4	.6	.7
<b>Total.....</b>		<b>.1</b>	<b>.1</b>	<b>.5</b>	<b>1.9</b>	<b>2.8</b>	<b>2.9</b>

<sup>a</sup> The government's total "unfunded past service costs" of the military retirement program at current pay rates is estimated to amount to \$61.1 billion at July 1, 1965. In FY 1966, it would require \$2.2 billion to fund "current service costs."

<sup>b</sup> Excludes cost of nuclear warheads.

<sup>c</sup> In FY 1961 and FY 1962 funds for this activity were appropriated to the military departments.

OASD Comptroller  
25 January 1965

## Department of Defense

## DIRECT BUDGET PLAN (TOA), NEW OBLIGATIONAL AUTHORITY, DIRECT OBLIGATIONS AND EXPENDITURES

## Fiscal Years 1964-1966

(Millions of Dollars)

Functional Classification	Direct Budget Plan (TOA)			New Obligational Authority			Direct obligations			Expenditures		
	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966
<b>Military Personnel</b>												
Active Forces.....	12,288	12,720	12,771	11,951	a 12,488	12,301	12,288	12,720	12,771	12,312	12,666	12,584
Reserve Forces.....	695	787	730	703	779	730	695	787	730	674	774	706
Retired Pay.....	1,211	1,399	1,529	1,228	1,399	1,529	1,211	1,399	1,529	1,209	1,380	1,510
Total.....	14,194	14,906	15,030	b 13,883	b 14,666	b 14,560	14,194	14,906	15,030	14,195	14,820	14,800
<b>Operation and Maintenance</b>												
Procurement.....	11,693	12,450	12,472	11,705	a 12,451	12,472	11,693	12,450	12,472	11,932	12,220	12,160
Research, Development, Test, and Evaluation.....	15,831	14,026	13,917	15,645	13,386	11,412	15,643	13,500	12,900	15,351	13,275	13,220
Military Construction.....	7,137	6,563	6,764	6,984	6,485	6,709	6,873	6,600	6,700	7,021	6,700	6,400
Family Housing.....	988	911	1,357	949	940	1,313	980	995	1,170	1,026	1,000	920
Civil Defense.....	672	667	748	644	631	736	635	673	700	580	630	660
Revolving and Management Funds.....	111	105	194	112	105	194	112	118	196	107	125	110
Total, Military Functions.....	50,625	49,628	50,481	49,922	48,663	47,395	50,131	49,243	49,168	49,760	48,100	47,900
Military Assistance <sup>c</sup> .....	1,237	1,223	1,258	1,000	1,055	1,170	1,236	1,213	1,248	1,485	1,200	1,100
Total, Mil. Functions and Mil. Assistance.....	51,862	50,851	51,739	50,922	49,718	48,565	51,367	50,456	50,416	51,245	49,300	49,000
<b>Department or Agency</b>												
Department of the Army.....	12,465	12,049	12,439	12,513	11,752	11,336	11,992	12,076	12,176	12,050	11,935	11,726
Department of the Navy.....	14,827	14,720	15,341	14,899	14,558	14,272	14,731	14,009	14,891	14,520	14,107	14,741
Department of the Air Force.....	20,272	19,440	18,882	19,446	18,961	17,992	20,389	19,126	18,378	20,509	18,963	18,235
Defense Agencies/OSD.....	2,950	3,315	3,625	2,951	3,287	3,601	2,906	3,314	3,527	2,574	2,969	3,088
Civil Defense.....	111	105	194	112	105	194	112	118	196	107	125	110
Total, Military Functions.....	50,625	49,628	50,481	49,922	48,663	47,395	50,131	49,243	49,168	49,760	48,100	47,900
Military Assistance <sup>c</sup> .....	1,237	1,223	1,258	1,000	1,055	1,170	1,236	1,213	1,248	1,485	1,200	1,100
Total, Mil. Functions and Mil. Assistance.....	51,862	50,851	51,739	50,922	49,718	48,565	51,367	50,456	50,416	51,245	49,300	49,000

<sup>a</sup> Includes amounts proposed for separate transmittal for pay increases; \$98,000,000 in Military Personnel for military pay increase and \$132,394,000 in Operation and Maintenance for civilian pay increase.

<sup>b</sup> In addition, transfers from working capital funds; FY 1964, \$321,253,677; FY 1965, \$240,000,000; FY 1966, \$170,000,000.

<sup>c</sup> Consistent with the FY 1966 Budget Document presentation, Military Assistance orders (reservations) placed with the military departments are treated in the same manner as obligations.

OASD Comptroller  
FAD-500  
25 January 1965



**Department of Defense**  
**DIRECT BUDGET PLAN (TOA), NEW OBLIGATIONAL AUTHORITY, DIRECT OBLIGATIONS, AND EXPENDITURES**  
**Fiscal Year 1966—By Functional Title and Service**

(Millions of Dollars)

Functional Classification	Direct Budget Plan (TOA)				New Obligational Authority				Direct Obligations				Expenditures			
	Total	Army	Navy	Air Force	Defense Agencies and Civil Defense	Total	Army	Navy	Air Force	Defense Agencies and Civil Defense	Total	Army	Navy	Air Force	Defense Agencies and Civil Defense	
MILITARY PERSONNEL																
Active Forces.....	12,771	4,343	3,950	4,479	—	12,301	4,103	3,805	4,394	—	12,771	4,343	3,950	4,470	—	—
Reserve Forces.....	730	460	138	132	—	730	460	138	132	—	730	460	138	132	—	—
Retired Pay.....	1,529	—	—	—	1,529	1,529	—	—	—	1,529	1,529	—	—	—	—	1,510
Total.....	15,030	4,802	4,088	4,611	1,529	14,560	4,562	3,943	4,526	1,529	15,030	4,802	4,088	4,611	1,529	1,510
OPERATION AND MAINTENANCE.....	12,472	3,672	3,525	4,702	573	12,472	3,672	3,525	4,702	573	12,472	3,672	3,525	4,702	573	537
PROCUREMENT																
Aircraft.....	6,367	344	2,172	3,850	—	5,810	344	1,916	3,550	—	5,902	335	2,017	3,550	—	—
Missiles.....	1,806	254	391	1,161	—	1,427	254	377	796	—	1,732	235	397	1,100	—	—
Ships.....	1,906	—	1,906	—	—	1,501	—	1,501	—	—	1,860	900	816	1,948	—	—
Ordnance, Vehicles, and Related Equipment.....	1,980	1,024	599	355	1	1,188	445	429	313	1	1,710	900	531	278	1	1
Electronics and Communications.....	999	240	417	334	27	772	104	365	294	7	910	230	349	325	6	7
Other Procurement.....	859	173	419	240	27	714	76	395	227	16	787	160	377	227	23	32
Total.....	13,917	2,036	5,905	5,941	35	11,412	1,223	4,984	5,181	24	12,900	1,860	5,530	5,480	30	40
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION																
Military Sciences.....	1,039	169	200	169	500	1,039	169	200	169	500	1,022	166	198	169	490	460
Aircraft.....	992	92	195	705	—	963	92	195	676	—	992	89	200	703	—	—
Missiles.....	1,780	641	381	758	—	1,772	633	381	758	—	1,758	629	373	756	—	—
Astronautics.....	1,040	20	24	995	—	1,022	2	24	995	—	1,034	17	24	993	—	—
Ships.....	332	2	330	—	—	332	2	330	—	—	322	12	320	—	—	—
Ordnance, Vehicles, and Related Equipment.....	364	184	180	—	—	364	184	180	—	—	372	183	189	—	—	—
Other Equipment.....	624	281	85	258	—	624	281	85	258	—	607	270	80	257	—	—
Programwide Management and Support.....	443	75	76	293	—	443	75	76	293	—	443	75	76	293	—	—
Emergency Fund.....	150	—	—	—	150	150	—	—	—	150	150	—	—	—	—	30
Total.....	6,764	1,464	1,473	3,177	650	6,709	1,438	1,473	3,148	650	6,700	1,430	1,460	3,170	640	490
MILITARY CONSTRUCTION																
Active Forces.....	1,314	449	342	435	88	1,290	441	338	422	88	1,335	400	280	400	55	23
Reserve Forces.....	42	16	10	17	—	24	—	10	14	—	35	12	8	15	—	—
Total.....	1,357	465	351	452	88	1,313	441	348	436	88	1,370	412	288	415	55	23
FAMILY HOUSING.....	748	—	—	—	748	736	—	—	—	736	700	—	—	—	—	660
CIVIL DEFENSE.....	194	—	—	—	194	194	—	—	—	194	196	—	—	—	196	110
REVOLVING AND MANAGEMENT FUNDS																
Total—Military Functions.....	50,481	12,439	15,341	18,882	3,818	47,395	11,336	14,272	17,992	3,794	49,168	12,176	14,891	18,378	3,723	3,198
MILITARY ASSISTANCE.....	1,258	—	—	—	—	1,170	—	—	—	—	1,248	—	—	—	—	—
Total—Mil. Functions & Mil. Assistance.....	51,739	—	—	—	—	48,565	—	—	—	—	50,416	—	—	—	—	—

\* In addition, transfers from working capital funds: Army, \$240 million; Navy, \$145 million; Air Force, \$85 million; total, \$470 million.

† Consistent with the FY 1966 Budget Document presentation, Military Assistance orders (reservations) placed with the military departments are treated in the same manner as obligations.

OASD Comptroller  
FAD-501  
25 January 1965 (Rev)

# Department of Defense—Military Functions

## PROCUREMENT

FY 1964—1966

(Millions of Dollars)

Functional Classification	Direct Budget Plan (TOA)				New Obligational Authority				Direct Obligations				Expenditures			
	FY 1964	FY 1965	FY 1966		FY 1964	FY 1965	FY 1966		FY 1964	FY 1965	FY 1966		FY 1964	FY 1965	FY 1966	
AIRCRAFT																
Army-----	532	383	344		458	442	344		487	390	335		300	373	347	
Navy-----	1,880	1,952	2,172		1,796	1,836	1,916		1,964	1,938	2,017		1,859	1,721	1,950	
Air Force-----	3,759	3,907	3,850		3,386	3,564	3,550		4,247	3,600	3,550		3,894	3,450	3,220	
Total-----	6,172	6,241	6,367		5,640	5,842	5,810		6,698	5,928	5,902		6,053	5,543	5,516	
MISSILES																
Army-----	406	234	254		462	234	254		385	230	235		496	273	261	
Navy-----	846	664	391		1,108	663	377		910	583	397		981	772	590	
Air Force-----	2,314	1,619	1,161		2,106	1,715	796		2,137	1,550	1,100		2,101	1,590	1,460	
Total-----	3,567	2,518	1,806		3,676	2,612	1,427		3,441	2,363	1,732		3,577	2,635	2,311	
SHIPS—Navy-----	2,088	1,785	1,906		2,060	1,930	1,501		2,043	1,780	1,860		2,078	1,818	1,948	
ORDNANCE, VEHICLES, AND RELATED EQUIPMENT																
Army-----	1,004	864	1,024		1,307	648	445		916	860	900		964	725	816	
Navy-----	456	482	599		478	436	429		394	493	531		404	422	486	
Air Force-----	247	271	355		242	230	313		195	226	278		228	235	335	
Defense Agencies/OSD-----	1	1	1		1	1	1		1	1	1		1	1	1	
Total-----	1,707	1,618	1,980		2,028	1,315	1,188		1,505	1,580	1,710		1,597	1,383	1,638	
ELECTRONICS AND COMMUNICATIONS																
Army-----	436	207	240		357	178	104		300	230	230		357	323	245	
Navy-----	431	452	417		499	427	365		419	420	349		340	349	356	
Air Force-----	506	465	334		485	412	294		442	451	325		560	405	316	
Defense Agencies/OSD-----	10	10	7		12	16	7		10	10	6		7	10	7	
Total-----	1,383	1,135	999		1,353	1,032	772		1,171	1,111	910		1,264	1,087	924	
OTHER PROCUREMENT																
Army-----	257	187	173		322	154	76		214	190	160		198	277	211	
Navy-----	441	372	419		385	338	395		378	386	377		380	385	406	
Air Force-----	185	129	240		152	117	227		161	123	227		176	112	234	
Defense Agencies/OSD-----	33	42	27		31	46	16		31	40	23		27	35	32	
Total-----	915	730	859		889	655	714		785	739	787		782	809	883	
TOTAL—PROCUREMENT																
Army-----	2,635	1,875	2,036		2,906	1,656	1,223		2,312	1,900	1,860		2,315	1,970	1,880	
Navy-----	6,142	5,707	5,905		6,326	5,630	4,984		6,109	5,600	5,530		6,042	5,467	5,735	
Air Force-----	7,011	6,391	5,941		6,370	6,038	5,181		7,181	5,950	5,480		6,959	5,792	5,565	
Defense Agencies/OSD-----	44	53	35		44	62	24		42	50	30		35	46	40	
TOTAL-----	15,831	14,026	13,917		15,645	13,386	11,412		15,643	13,500	12,900		15,351	13,275	13,220	

OASD Comptroller  
FAD-502  
25 January 1965



**Department of Defense—Military Functions**  
**RESEARCH, DEVELOPMENT, TEST, AND EVALUATION**

**FY 1964—1966**

(Millions of Dollars)

Functional Classification	Direct Budget Plan (TOA)			New Obligational Authority			Direct Obligations			Expenditures		
	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966	FY 1964	FY 1965	FY 1966
<b>MILITARY SCIENCES</b>												
Army.....	150	159	169	207	156	169	146	159	166	179	160	162
Navy.....	176	182	200	178	178	200	194	183	198	194	184	184
Air Force.....	151	163	169	126	130	169	132	164	169	121	134	146
Defense Agencies/OSD.....	477	497	500	475	497	500	468	492	490	384	475	460
Total.....	954	1,001	1,039	986	961	1,039	939	997	1,022	878	953	951
<b>AIRCRAFT</b>												
Army.....	94	73	92	75	69	92	76	75	80	88	81	80
Navy.....	236	244	195	213	240	195	231	247	200	182	208	194
Air Force.....	732	835	705	326	737	676	686	826	703	699	612	647
Total.....	1,062	1,142	992	614	1,046	963	993	1,148	992	939	902	921
<b>MISSILES</b>												
Army.....	595	627	641	569	607	633	577	627	629	567	604	611
Navy.....	594	388	381	575	367	370	373	370	373	689	515	409
Air Force.....	1,019	793	758	1,002	787	758	1,018	794	756	1,096	938	829
Total.....	2,207	1,789	1,780	2,146	1,761	1,772	2,141	1,791	1,758	2,352	2,058	1,849
<b>ASTRONAUTICS</b>												
Army.....	25	15	20	19	15	2	20	18	17	18	24	18
Navy.....	30	24	40	24	31	24	35	28	24	51	35	27
Air Force.....	1,196	862	995	1,432	836	995	1,220	864	993	1,215	1,081	1,013
Total.....	1,251	901	1,040	1,491	882	1,022	1,275	910	1,034	1,284	1,140	1,057
<b>SHIPS</b>												
Army.....	1	1	2	1	1	2	—	1	2	—	1	1
Navy.....	275	273	330	288	275	330	250	273	320	264	272	290
Total.....	276	274	332	289	276	332	250	274	322	264	273	291
<b>ORDNANCE, VEHICLES, AND RELATED EQUIPMENT</b>												
Army.....	212	185	184	164	187	184	199	189	183	197	193	180
Navy.....	121	137	180	136	139	180	113	140	189	82	108	151
Air Force.....	—	—	—	—	—	—	—	—	—	1	—	—
Total.....	333	322	364	300	327	364	312	329	372	280	301	331
<b>OTHER EQUIPMENT</b>												
Army.....	285	244	281	295	261	281	233	258	270	215	261	250
Navy.....	69	66	85	61	58	85	61	66	80	48	61	70
Air Force.....	233	262	258	280	268	258	225	263	257	177	201	208
Total.....	587	573	624	636	587	624	518	587	607	440	523	528
<b>PROGRAM-WIDE MANAGEMENT AND SUPPORT</b>												
Army.....	74	73	75	72	72	75	70	73	75	74	76	74
Navy.....	64	71	76	69	63	76	62	73	76	98	67	70
Air Force.....	309	300	293	379	391	293	311	300	293	414	384	298
Total.....	447	443	443	520	526	443	443	446	443	585	527	441
<b>EMERGENCY FUND</b>												
Army.....	—	118	150	2	118	150	—	118	150	—	25	30
<b>TOTAL—RESEARCH, DEVELOPMENT, TEST, AND EVAL.</b>												
Army.....	1,435	1,376	1,464	1,402	1,368	1,438	1,321	1,400	1,430	1,338	1,400	1,375
Navy.....	1,565	1,366	1,473	1,561	1,352	1,473	1,492	1,380	1,460	1,578	1,450	1,395
Air Force.....	3,000	3,206	3,177	3,514	3,136	3,148	3,592	3,210	3,170	3,723	3,350	3,140
Defense Agencies/OSD.....	477	615	690	477	615	650	468	610	640	384	500	490
<b>TOTAL</b>	7,137	6,563	6,764	6,984	6,485	6,709	6,873	6,600	6,700	7,021	6,700	6,400

OASD Comptroller  
FAD-503  
25 January 1965 (Rev)

## Department of Defense

## ESTIMATED OBLIGATIONS AND AMOUNTS AVAILABLE FOR OBLIGATION

## General Fund Appropriations—FY 1964–1966

(Thousands of Dollars)

	Unobligated balance brought forward	New Obligational Authority	Transfers of prior year balances	Reimburse- ments	Recoveries of prior year obligations	Total available for obligation	Obligations incurred	Unobligated balance expiring for obligation	Unobligated balance carried forward
<b>FISCAL YEAR 1964 — ACTUAL</b>									
Department of the Army.....	1,555,854	12,513,223	146,254	2,138,004	—	16,353,334	13,983,349	7,587	2,362,398
Department of the Navy.....	4,263,775	14,899,299	120,000	756,571	7,900	20,047,545	15,361,918	23,091	4,662,535
Department of the Air Force.....	3,058,076	19,446,282	55,000	1,446,491	—	24,005,849	21,370,231	1,806	2,633,812
Defense Agencies/OSD.....	267,501	2,951,377	—	256,913	—	3,475,791	3,150,510	39,793	285,488
Civil Defense.....	18,294	111,562	—	240	—	130,065	112,643	1,027	16,426
Total—Military Functions.....	9,163,499	49,921,742	321,254	4,598,219	7,900	64,012,614	53,978,651	73,304	9,960,659
Military Assistance <sup>a</sup> .....	25,767	1,000,000	90,000	77,300	124,811	1,317,878	1,313,457	24	4,398
Total—Mil. Functions & Mil. Assistance.....	9,189,266	50,921,742	411,254	4,675,519	132,711	65,330,492	55,292,108	73,328	9,965,057
<b>FISCAL YEAR 1965 — ESTIMATED</b>									
Department of the Army.....	2,362,398	11,751,725	85,000	1,715,525	—	15,914,648	13,877,352	13	2,037,282
Department of the Navy.....	4,662,535	14,537,799	70,600	1,034,628	—	20,325,562	15,506,438	—	4,819,125
Department of the Air Force.....	2,633,812	18,961,435	84,400	977,117	—	22,656,764	20,158,727	—	2,498,036
Defense Agencies/OSD.....	285,488	3,287,325	—	273,437	—	3,846,250	3,579,342	—	266,908
Civil Defense.....	16,426	105,185	—	125	—	121,736	118,460	—	3,276
Total—Military Functions.....	9,960,659	48,663,468	240,000	4,000,832	—	62,864,950	53,240,319	13	9,624,627
Military Assistance <sup>a</sup> .....	4,398	1,055,000	50,000	24,400	116,799	1,250,597	1,240,597	—	10,000
Total—Mil. Functions & Mil. Assistance.....	9,965,057	49,718,468	290,000	4,025,232	116,799	64,115,556	54,480,916	13	9,634,627
<b>FISCAL YEAR 1966 — ESTIMATED</b>									
Department of the Army.....	2,037,282	11,336,459	240,000	1,721,356	—	15,335,097	13,808,425	—	1,526,672
Department of the Navy.....	4,819,125	14,271,800	145,000	738,138	—	19,974,063	15,609,663	—	4,364,400
Department of the Air Force.....	2,498,036	17,992,300	85,000	1,131,313	—	21,706,649	19,408,613	—	2,298,036
Defense Agencies/OSD.....	266,908	3,600,541	—	63,254	—	3,930,703	3,583,463	—	347,240
Civil Defense.....	3,276	193,900	—	125	—	197,301	196,112	—	1,189
Total—Military Functions.....	9,624,627	47,395,000	470,000	3,654,186	—	61,143,813	52,606,276	—	8,537,537
Military Assistance <sup>a</sup> .....	10,000	1,170,000	—	22,500	78,000	1,280,500	1,270,500	—	10,000
Total—Mil. Functions & Mil. Assistance.....	9,634,627	48,565,000	470,000	3,676,686	78,000	62,424,313	53,876,776	—	8,547,537

<sup>a</sup> Consistent with the FY 1966 Budget Document presentation, Military Assistance orders (reservations) placed with the military departments are treated in the same manner as obligations.

OASD Comptroller  
FAD-504  
25 January 1965



# Department of Defense

## ESTIMATED EXPENDITURES AND AMOUNTS AVAILABLE FOR EXPENDITURES

### Fiscal Years 1964-1966

(Thousands of Dollars)

	Unexpended balance brought forward	New Obligational Authority	Transfers of prior year balances	Total available for expenditure	Expenditures	Balances withdrawn (-) or restored	Unexpended balance carried forward
<b>FISCAL YEAR 1964 — ACTUAL</b>							
Department of the Army.....	5,386,169	12,513,223	50,000	17,949,392	12,049,891	-88,604	5,810,896
Department of the Navy.....	13,770,564	14,899,299	30,000	28,699,862	14,520,037	-36,522	14,143,303
Department of the Air Force.....	9,763,542	19,446,282	20,000	29,229,824	20,508,648	-32,995	8,688,182
Defense Agencies/OSD.....	984,985	2,951,377	-100,000	3,836,362	2,574,196	-52,527	1,209,640
Civil Defense.....	114,089	111,562	—	225,650	106,826	-4,921	113,903
Total—Military Functions.....	30,019,349	49,921,742	—	79,941,091	49,759,598	-215,569	29,965,924
Military Assistance.....	2,388,810	1,000,000	90,000	3,478,810	1,485,277	-24	1,993,509
Total—Mil. Functions & Mil. Assistance.....	32,408,159	50,921,742	90,000	83,419,901	51,244,875	-215,593	31,959,433
<b>FISCAL YEAR 1965 — ESTIMATED</b>							
Department of the Army.....	5,810,896	11,751,725	50,000	17,612,621	11,935,467	-13	5,677,141
Department of the Navy.....	14,143,303	14,557,799	57,600	28,758,702	14,107,387	—	14,651,215
Department of the Air Force.....	8,688,182	18,961,435	43,400	27,693,017	18,962,677	—	8,730,340
Defense Agencies/OSD.....	1,209,640	3,287,325	-151,000	4,345,965	2,969,369	—	1,376,596
Civil Defense.....	113,903	105,185	—	219,088	125,000	—	94,088
Total—Military Functions.....	29,965,924	48,663,468	—	78,629,392	48,100,000	-13	30,529,379
Military Assistance.....	1,993,509	1,055,000	50,000	3,098,509	1,200,000	—	1,898,509
Total—Mil. Functions & Mil. Assistance.....	31,959,433	49,718,468	50,000	81,727,901	49,300,000	-13	32,427,888
<b>FISCAL YEAR 1966 — ESTIMATED</b>							
Department of the Army.....	5,677,141	11,336,459	55,000	17,068,600	11,725,565	* 66,344	5,409,379
Department of the Navy.....	14,651,215	14,271,800	80,000	29,003,015	14,741,030	8,600	14,270,585
Department of the Air Force.....	8,730,340	17,992,300	60,000	26,782,640	18,234,985	45,800	8,593,455
Defense Agencies/OSD.....	1,376,596	3,600,541	-195,000	4,782,137	3,085,420	—	1,693,717
Civil Defense.....	94,088	183,900	—	287,988	110,000	—	177,988
Total—Military Functions.....	30,529,379	47,385,000	—	77,924,379	47,900,000	120,744	30,145,123
Military Assistance.....	1,898,509	1,170,000	—	3,068,509	1,100,000	—	1,968,509
Total—Mil. Functions & Mil. Assistance.....	32,427,888	48,555,000	—	80,992,888	49,000,000	120,744	32,113,632

\* Includes appropriation to liquidate contract authority in amount of \$54,041,000.

OASD Comptroller  
FAD-505  
25 January 1965

## Department of Defense

**ORDER OF MAGNITUDE DATA ON COMPARATIVE NEW OBIGATIONAL AUTHORITY BY FUNCTIONAL TITLE  
AS IF FY 1966 BUDGET STRUCTURE HAD BEEN ADOPTED CIRCA 1948**

FY 1954-1966

(Millions of Dollars)

Functional Classification	FY 1954	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	FY 1964	FY 1965	FY 1966
<b>MILITARY PERSONNEL</b>													
Active Forces.....	11,266	10,650	10,526	10,411	10,398	10,709	10,637	10,695	11,545	11,431	12,273	12,720	12,771
Reserve Forces.....	315	369	512	613	607	644	674	660	633	672	703	787	730
Retired Pay.....	387	424	495	515	567	640	715	790	920	1,026	1,228	1,399	1,529
<b>Total.....</b>	<b>11,968</b>	<b>11,442</b>	<b>11,534</b>	<b>11,539</b>	<b>11,572</b>	<b>11,993</b>	<b>12,026</b>	<b>12,144</b>	<b>13,098</b>	<b>13,129</b>	<b>14,204</b>	<b>14,906</b>	<b>15,030</b>
<b>OPERATION AND MAINTENANCE.....</b>	<b>9,462</b>	<b>8,276</b>	<b>8,768</b>	<b>9,734</b>	<b>10,221</b>	<b>10,187</b>	<b>10,317</b>	<b>10,702</b>	<b>11,759</b>	<b>11,496</b>	<b>11,705</b>	<b>12,451</b>	<b>12,472</b>
<b>PROCUREMENT</b>													
Aircraft.....	5,041	4,922	6,923	6,559	5,945	6,167	5,929	4,998	5,646	5,882	5,640	5,842	5,810
Missiles.....	569	234	764	2,135	2,090	3,966	2,030	2,078	3,230	3,969	3,676	2,612	1,427
Ships.....	759	1,150	1,274	1,335	1,723	1,943	1,140	2,246	2,967	2,839	2,060	1,930	1,501
Ordnance, Vehicles, and Related Equipment.....	2,990	527	405	247	90	545	703	1,034	1,830	1,959	2,028	1,315	1,188
Electronics and Communications.....	395	327	215	469	549	982	1,179	935	1,375	1,176	1,353	1,032	772
Other procurement.....	835	260	214	549	586	701	720	425	697	742	889	655	714
<b>Total.....</b>	<b>10,588</b>	<b>7,420</b>	<b>9,795</b>	<b>11,294</b>	<b>10,983</b>	<b>14,304</b>	<b>11,701</b>	<b>11,716</b>	<b>15,746</b>	<b>16,667</b>	<b>15,645</b>	<b>13,386</b>	<b>11,412</b>
<b>RESEARCH, DEVELOPMENT, TEST, AND EVALUATION.....</b>	<b>2,165</b>	<b>1,708</b>	<b>1,828</b>	<b>2,185</b>	<b>2,345</b>	<b>3,777</b>	<b>5,620</b>	<b>6,033</b>	<b>6,402</b>	<b>6,993</b>	<b>6,984</b>	<b>6,485</b>	<b>6,709</b>
<b>MILITARY CONSTRUCTION.....</b>	<b>308</b>	<b>882</b>	<b>2,012</b>	<b>1,915</b>	<b>2,085</b>	<b>1,385</b>	<b>1,364</b>	<b>1,061</b>	<b>972</b>	<b>1,204</b>	<b>949</b>	<b>940</b>	<b>1,313</b>
<b>FAMILY HOUSING.....</b>	—	—	—	—	—	—	—	—	—	590	644	631	736
<b>CIVIL DEFENSE.....</b>	—	—	—	—	—	—	—	—	257	126	112	105	194
<b>REVOLVING AND MANAGEMENT FUNDS.....</b>	<b>100</b>	<b>1,119</b>	—	<b>75</b>	<b>130</b>	<b>57</b>	<b>30</b>	<b>30</b>	<b>(<sup>a</sup>)</b>	<b>(<sup>a</sup>)</b>	—	—	—
<b>SUBTOTAL—MILITARY FUNCTIONS—NEW OBIGATIONAL AVAILABILITY.....</b>	<b>34,590</b>	<b>30,847</b>	<b>33,937</b>	<b>36,742</b>	<b>37,337</b>	<b>41,703</b>	<b>41,058</b>	<b>41,686</b>	<b>48,234</b>	<b>50,204</b>	<b>50,243</b>	<b>48,903</b>	<b>47,865</b>
Transfers from prior year balances.....	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOTAL—MILITARY FUNCTIONS—NEW OBIGATIONAL AUTHORITY.....</b>	<b>34,590</b>	<b>30,787</b>	<b>33,187</b>	<b>36,255</b>	<b>36,747</b>	<b>41,168</b>	<b>40,628</b>	<b>41,321</b>	<b>47,846</b>	<b>49,794</b>	<b>49,922</b>	<b>48,663</b>	<b>47,395</b>
<b>MILITARY ASSISTANCE—NEW OBLIG. AUTHORITY.....</b>	<b>3,762</b>	<b>1,204</b>	<b>1,016</b>	<b>2,018</b>	<b>1,340</b>	<b>1,515</b>	<b>1,331</b>	<b>1,785</b>	<b>1,577</b>	<b>1,325</b>	<b>1,000</b>	<b>1,055</b>	<b>1,170</b>
<b>TOTAL—MILITARY FUNCTIONS AND MAP.....</b>	<b>38,352</b>	<b>31,991</b>	<b>34,203</b>	<b>38,273</b>	<b>38,087</b>	<b>42,683</b>	<b>41,959</b>	<b>43,106</b>	<b>49,423</b>	<b>51,119</b>	<b>50,922</b>	<b>49,718</b>	<b>48,565</b>

NOTE: Amounts include estimated comparability adjustments not supportable by accounting records.

<sup>a</sup> Excludes authority in Stock Funds (10 U.S.C. 2210(b)) to incur reimbursable obligations in anticipation of reimbursable orders to be received in subsequent years. Such authority is included in the Budget Document presentation as "New Obligational Authority."

<sup>b</sup> Includes amounts proposed for separate transmittal for pay increases: \$98,000,000 in Military Personnel for military pay increase and \$132,394,000 in Operation and Maintenance for civilian pay increase.

OASD Comptroller,  
FAD-396  
25 January 1965



ORDER OF MAGNITUDE DATA ON COMPARATIVE EXPENDITURES BY FUNCTIONAL TITLE  
AS IF FY 1966 BUDGET STRUCTURE HAD BEEN ADOPTED CIRCA 1948

FY 1954-1966

(Millions of Dollars)

Functional Classification	FY 1954	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	FY 1964	FY 1965	FY 1966
<b>MILITARY PERSONNEL</b>													
Active Forces.....	10,963	10,643	10,665	10,384	10,441	10,545	10,390	10,651	11,530	11,386	12,312	12,666	12,584
Reserve Forces.....	293	341	439	514	608	615	654	648	607	599	674	774	706
Retired Pay.....	386	419	477	511	562	641	694	786	894	1,015	1,209	1,380	1,510
Total.....	11,643	11,403	11,582	11,409	11,611	11,801	11,738	12,085	13,032	13,000	14,195	14,820	14,800
<b>OPERATION AND MAINTENANCE</b>	9,162	7,931	8,400	9,487	9,761	10,378	10,223	10,611	11,594	11,874	11,932	12,220	12,160
<b>PROCUREMENT</b>													
Aircraft.....	9,080	8,804	7,835	8,647	8,793	7,730	6,272	5,898	6,400	6,309	6,053	5,543	5,516
Missiles.....	417	604	1,005	1,855	2,434	3,337	3,027	2,972	3,442	3,817	3,577	2,635	2,311
Ships.....	905	944	858	842	1,105	1,491	1,744	1,891	1,906	2,522	2,078	1,818	1,948
Ordnance, Vehicles, and Related Equipment.....	3,334	1,191	1,260	674	365	399	443	675	1,137	1,665	1,597	1,383	1,638
Electronics and Communications.....	700	441	660	704	663	720	1,093	1,042	1,139	1,427	1,264	1,087	924
Other Procurement.....	1,521	854	608	767	723	730	755	706	507	891	782	809	883
Total.....	15,957	12,838	12,227	13,488	14,083	14,409	13,334	13,095	14,532	16,632	15,351	13,275	13,220
<b>RESEARCH, DEVELOPMENT, TEST, AND EVALUATION</b>	2,187	2,261	2,101	2,406	2,504	2,866	4,710	6,131	6,319	6,376	7,021	6,700	6,400
<b>MILITARY CONSTRUCTION</b>	1,744	1,715	2,079	1,968	1,753	1,948	1,626	1,605	1,347	1,144	1,026	1,000	920
<b>FAMILY HOUSING</b>	—	—	—	—	—	—	—	—	—	427	580	630	660
<b>CIVIL DEFENSE</b>	—	—	—	—	—	—	—	—	90	203	107	125	110
<b>REVOLVING AND MANAGEMENT FUNDS</b>	-219	-611	-684	-323	-643	-179	-416	-300	-99	-1,401	-452	-670	-370
<b>ADJUSTMENT TO BUDGET BASIS</b>	-148	-6	86	—	—	—	—	—	—	—	—	—	—
<b>TOTAL—MILITARY FUNCTIONS</b>	40,326	35,531	35,792	38,436	39,070	41,223	41,215	43,227	46,815	48,252	49,760	48,100	47,900
<b>MILITARY ASSISTANCE</b>	3,629	2,292	2,611	2,352	2,187	2,340	1,609	1,449	1,390	1,721	1,485	1,200	1,100
<b>TOTAL—MILITARY FUNCTIONS &amp; MILITARY ASSISTANCE</b>	43,955	37,823	38,403	40,788	41,258	43,563	42,824	44,676	48,205	49,973	51,245	49,300	49,000

NOTE: Amounts include estimated comparability adjustments not supportable by accounting records.

OASD (Comptroller)  
FAD-397  
25 January 1965



## DEFENSE PROCUREMENT

Contracts of \$1,000,000 and over awarded during month of January 1965:

### DEFENSE SUPPLY AGENCY

- 5—Texaco Inc., New York, N. Y. \$2,841,435. Gasoline and fuel oil. Defense Fuel Supply Center, Washington, D. C.
- 13—Charles Pfizer & Co., New York, N. Y. \$1,311,298. 248,532 bottles of oxytetracycline tablets. Brooklyn, N. Y. Defense Medical Supply Center, Brooklyn, N. Y.
- 22—United States Steel Corp., Washington, D. C. \$1,316,289. 4,600,000 pounds of steel plates for use by the Navy. Homestead, Pa. Defense Industrial Supply Center, Philadelphia, Pa.
- Riegel Textile Corp., New York, N. Y. \$2,193,750. 4,114,272 yards of cotton sateen cloth. Trion, Ga. Defense Clothing & Textile Supply Center, Philadelphia, Pa.
- 25—Bonham Mfg. Co., Inc., Bonham, Tex. \$1,096,658. 117,280 men's raincoats for the Army. Bonham. Defense Clothing & Textile Supply Center, Philadelphia, Pa.
- 28—J. P. Stevens & Co., Inc., New York, N. Y. \$1,179,999. 1,364,000 yards of cotton cloth. Great Falls and Wallace, S. C. Defense Clothing & Textile Supply Center, Philadelphia, Pa.
- Burlington Industries, Inc., New York, N. Y. \$1,147,187. 1,250,000 yards of cotton cloth. Cramerton, N. C. Defense Clothing & Textile Supply Center, Philadelphia, Pa.

### ARMY

- 4—Peter Kiewit Sons Co., Omaha, Neb. \$3,666,430. Construction and excavation work on the Dworshak Dam and Reservoir Project. Orofino, Idaho. Dist. Corps of Engineers, Walla Walla, Wash.
- 5—Quiller Construction Co., Los Angeles, Calif. \$1,566,080. Construction of 100 noncommissioned officer family housing units at Ft. Irwin, Calif. Dist. Corps of Engineers, Los Angeles, Calif.
- Western Electric Co., New York, N. Y. \$90,664,200. Research and development of NIKE-X missile system. Various locations in the United States. Project Office, Redstone Arsenal (AMC), Huntsville, Ala.
- Standard Dredging Corp., New York, N. Y. \$1,237,348. Dredging work on the Sabine Pass Channel and Anchorage Basin Project. Cameron Parish, Tex. U. S. Army Engineer Dist., Galveston, Tex.
- 8—Sylvania Electronics Systems, Sylvania Electric Products, Inc., Needham, Mass. \$8,000,000. Classified electronic equipment. Needham. U. S. Army Electronics Command (AMC), Ft. Monmouth, N. J.
- 11—Al Johnson Construction, Minneapolis, Minn. \$5,479,-

#### Contract Index

Contract information is listed in the following sequence: Date—Company—Dollar Value—Material—Location Work Performed—Contracting Agency

- 410. Excavation and construction work at the Broken Bow Reservoir, Okla. Project. Broken Bow. U. S. Army Engineer Dist., Tulsa, Okla.
- 12—Sperry Farragut Co., div. of Sperry Rand Corp., Bristol Tenn. \$2,985,000. Bristol. Procurement Dist. (AMC), Cincinnati, Ohio.
- Chris Berg, Inc., Seattle, Wash. \$1,044,786. Exterior repair to a base hospital including repair of utilities and communication facilities. Elmendorf AFB, Anchorage, Alaska. Dist. Corps of Engineers, Anchorage, Alaska.
- Philco Corp., Aeronutronics Div., Newport Beach, Calif. \$2,685,483. Program study on the PERSHING missile system. Newport Beach. Los Angeles Procurement Dist., Pasadena, Calif.
- Stewart & Stevenson Services, Houston, Tex. \$1,856,417. Generator sets for the PERSHING missile system. Houston. Engineer Procurement Office (AMC), Chicago, Ill.
- 13—Continental Aviation & Engineering Corp., Detroit, Mich. \$2,017,137. Production engineering services for engines used on 2½ and 5-ton tactical trucks. Detroit. U. S. Army Mobility Command (AMC), Warren, Mich.
- 15—Gibbons & Reed Co., Portland, Ore. \$11,723,875. Construction and excavation work on the John Day Lock and Dam Project. Gilliam County, Ore. Dist. Corps of Engineers, Walla Walla, Wash.
- Esso Research & Engineering Co., Linden, N. J. \$1,559,100. Research and development on high performance propellants. Linden. U. S. Army Missile Command (AMC), Huntsville, Ala.
- TEMCO Electronics & Missile Co., div. of Ling-Temco-Vought, Inc., Dallas, Tex. \$2,900,000. Classified research and development. Dallas. Army Electronics Command (AMC), Ft. Monmouth, N. J.
- Bauer Dredging Co., Inc., Port Lavaca, Tex. \$3,038,830. Excavation and bank stabilization on the Arkansas River Navigation Project. Gould, Ark. U. S. Army Engineer Dist., Little Rock, Ark.
- Continental Drilling Co. \$1,202,250. Drilling work on the John Day Lock and Dam Project. Sherman County, Ore. and Klickitat County, Wash. Dist. Corps of Engineers, Walla Walla, Wash.
- 18—Joseph L. Muscarelle, Inc., Maywood, N. J. \$6,517,638. Construction of 366 family housing units in the Canal Zone which consists of 78 units at Ft. Davis; 62 units at Ft. Gulick; 180 units at Ft. Kabbe; 20 units at Ft. Amador; and 26 units at Coco Solo, Galeta Island. Dist. Corps of Engineers, Jacksonville, Fla.
- 21—Harvey Aluminum, Inc., Torrance, Calif. \$1,224,890. Supplementary hardware for use with the 8-inch projectile. Torrance. Los Angeles Procurement Dist., Pasadena, Calif.
- 22—Hercules Powder Co., Wilmington, Del. \$6,638,864. Loading, assembling, and packing of miscellaneous



- propellants, including HONEST JOHN, LITTLE JOHN, and NIKE boosters. Radford Army Ammunition Plant, Radford, Va. Ammunition Procurement & Supply Agency (AMC), Joliet, Ill.
- Sperry Rand Corp., New York, N. Y. \$3,537,148. Loading, assembling, and packing of various types of ammunition. Louisiana Army Ammunition Plant, Shreveport, La. Ammunition Procurement & Supply Agency (AMC), Joliet, Ill.
  - Teledyne Systems Corp., Los Angeles, Calif. \$1,708,520. AN/ARC-73 radio sets. Los Angeles. U. S. Army Electronics Command (AMC), Ft. Monmouth, N. J.
  - 25—Power Engineering Co., Inc., Sioux City, Iowa. \$1,187,000. Alteration of the electrical distribution system at Cape Kennedy Air Force Station (Eastern Test Range), Fla. Canaveral Dist. Corps of Engineers, Merritt Island, Fla.
  - Gahagan Dredging Corp., New York, N. Y. \$1,954,595. Dredging work at the Baltimore Harbor Projects, Md. Dist. Corps of Engineers, Baltimore, Md.
  - 26—Canadian Commercial Corp., Ottawa, Canada. \$2,205,849. Fabrication of five experimental Army gas turbines. Orinda Div. of Hawker Siddeley, Canada, Ltd., Toronto. U. S. Army Tank Automotive Center (AMC), Warren, Mich.
  - 27—R. E. Clarson, Inc., St. Petersburg, Fla. \$2,179,000. Additions and changes at launch complex No. 34 for the SATURN IB. Cape Kennedy, Fla. Canaveral Dist. Corps of Engineers, Merritt Island, Fla.
  - 28—Edrow Engineering Co., Inc., Tacoma Park, Md. \$1,017,680. Conversion of a warehouse to office space. Cameron Station, Alexandria, Va. Engineer Dist., Norfolk, Va.
  - Western Contracting Corp., Sioux City, Iowa. \$1,399,502. Removal and disposal work at the Chesapeake and Delaware Canal Project. Cecil County, Md. Dist. Corps of Engineers, Philadelphia, Pa.
  - 29—Collins Radio Co., Richardson, Tex. \$2,125,000. Radio terminal sets, AN/TRC-80. Richardson. U. S. Army Electronics Command, Procurement Div. (AMC), Philadelphia, Pa.
  - Canadian Commercial Corp., Ottawa, Canada. \$4,856,519. Light weight airborne Doppler Navigation sets for MOHAWK aircraft. Canadian Marconi Co., Montreal. Electronics Command (AMC), Ft. Monomuth, N. J.
  - Harvey Aluminum Sales, Inc., Torrance, Calif. \$11,122,871. Loading, assembling and packing of various types of ammunition. Milan Ammunition Plant, Milan, Tenn. Ammunition Procurement & Supply Agency (AMC), Joliet, Ill.
  - Instruments for Industry, Inc., Hicksville, N. Y. \$1,089,197. Electronic countermeasure sets (AN/MLQ-26) with ancillary items and repair parts. Hicksville. U. S. Army Electronics Command, Procurement Div. (AMC), Philadelphia, Pa.
  - ESSO Research & Engineering Co., Linden, N. J. \$1,082,511. Research program leading to development of Hydro-carbon air fuel cell batteries. Linden. Electronics Command (AMC), Ft. Monmouth, N. J.
  - William Matera, San Antonio, Tex. Construction of a 3-story masonry building. Medina Annex, Lackland AFB, San Antonio. Dist. Corps of Engineers, Fort Worth, Tex.
- ## Navy
- 4—Westinghouse Electric Corp., Pittsburgh, Pa. \$2,645,000. Research and development associated with nuclear propulsion plants for naval ships. Pittsburgh. Bureau of Ships.
  - Goodyear Aerospace Corp., Akron, Ohio. \$18,715,692. SUBROC missiles. Akron. Bureau of Naval Weapons.
  - Bendix Corp., Eclipse Pioneer Div., Teterboro, N. J. \$2,073,358. Stores release programmer systems for Navy aircraft. Teterboro. Bureau of Naval Weapons.
  - Sperry Rand Corp., Sperry Gyroscope Co. div., Syosset, N. Y. \$4,341,000. Engineering services for ships inertial navigation systems equipment aboard US and UK ballistic missile submarines and supporting installations. Syosset. Bureau of Ships.
  - Franklin Institute, Philadelphia, Pa. \$6,484,116. Research work on problems in naval warfare. Philadelphia. Office of Naval Research.
  - 5—Boeing Co., Vertol Div., Morton, Pa. \$10,992,000. Spare parts for the CH-46 and UH-46 helicopter aircraft. Morton. U. S. Navy Aviation Supply Office, Philadelphia, Pa.
  - Associated Aero Science Labs., Inc., Torrance, Calif. \$1,598,092. Data gathering, assessment, and reduction services for missile tests. Naval Ordnance Test Station, China Lake, Pasadena, Calif., and at Torrance and Ridgecrest, Calif.
  - 6—Raytheon Co., Lexington, Mass. \$8,816,679. Guidance and control groups for SIDEWINDER missiles. Lowell, Mass. Bureau of Naval Weapons.
  - Hughes Aircraft Co., Culver City, Calif. \$1,358,000. PHOENIX missile system. Culver City. Bureau of Naval Weapons.
  - General Electric Co., Ordnance Div., Pittsfield, Mass. \$6,328,000. POLARIS Mark 2 guidance assemblies. Pittsfield. Special Projects Office.
  - United Aircraft Corp., Sikorsky Aircraft Div., Stratford, Conn. \$1,684,304. CH-53A helicopters. Stratford. Bureau of Naval Weapons.
  - United Aircraft Corp., Pratt & Whitney Aircraft Div., East Hartford, Conn. \$6,422,724. J52-P-8A aircraft engines. East Hartford. Bureau of Naval Weapons.
  - United Aircraft Corp., Pratt & Whitney Aircraft Div., East Hartford, Conn. \$3,030,374. J60-P-6 engines. East Hartford. Bureau of Naval Weapons.
  - 7—Garrett Corp., AiResearch Mfg. Co. div., Phoenix, Ariz. \$2,601,046. Ground power units for starting jet engines. Los Angeles, Calif. Bureau of Naval Weapons.
  - 8—Electric Storage Battery Co., Washington, D. C. \$11,270,030. Submarine battery cell sets and elements. Philadelphia, Pa. Bureau of Ships.
  - Corbetta Construction Co., Des Plaines, Ill. \$1,610,500. Construction of 100 family housing units at Naval Training Center. Great Lakes, Ill. Dist. Public Works Officer, Ninth Naval Dist., Bureau of Yards & Docks.
  - 11—Litton Systems, Inc., Ordnance Control Div., Beverly Hills, Calif. \$9,426,681. Spare parts for ASQ-61 computer system, A6A attack aircraft, and special electronics installations on E-2A aircraft. Beverly Hills. U. S. Navy Aviation Supply Office, Philadelphia, Pa.
  - 13—Marinette Marine Corp., Marinette, Wis. \$4,343,336. Construction of eight large harbor tugs. Marinette. Bureau of Ships.

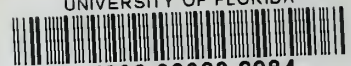
- 14—**Otis Elevator Co., Defense & Industrial Div.,** Brooklyn, N. Y. \$2,794,642. Consoles for use in surface ship torpedo firing systems. Brooklyn. U. S. Navy Purchasing Office, Washington, D. C.
- Treadwell Corp.,** New York, N. Y. \$2,539,324. Six-foot electrolytic oxygen generators, with engineering services and spares, for installation nuclear powered attack submarines (SSN). New York. Bureau of Ships.
- Hughes Aircraft Co.,** Culver City, Calif. \$13,042,000. PHOENIX missile system. Culver City. Bureau of Naval Weapons.
- North American Aviation, Inc., Autonetics Div.,** Anaheim, Calif. \$1,579,689. 11,172 man days of field engineering services on Ships Inertial Navigation Systems equipment. Shipyards throughout the United States and overseas. Bureau of Ships.
- 15—**Eastman Kodak Co., Apparatus & Optical Div.,** Rochester, N. Y. \$4,735,375. Proximity fuzes and associated equipment. Rochester. Bureau of Naval Weapons.
- Tacoma Boatbuilding Co., Inc.,** Tacoma, Wash. \$6,731,046. Three motor gunboats. Tacoma. Bureau of Ships.
- General Dynamics Corp.,** General Dynamics/Pomona, Calif. \$3,691,435. TERRIER/TARTAR missile program. Pomona. Bureau of Naval Weapons.
- 18—**Raytheon Co.,** Portsmouth, R. I. \$18,500,000. 12 integrated sonar sets for installation aboard nuclear powered attack submarines and two sets for test and training purposes. Portsmouth. Bureau of Ships.
- Vitro Corp. of America,** Silver Spring, Md. \$11,355,134. System engineering services for TERRIER, TARTAR, and TALOS missiles. Silver Spring. Bureau of Naval Weapons.
- 21—**Pratt & Whitney Aircraft Div.,** United Aircraft Corp., East Hartford, Conn. \$1,924,322. Spare parts to support the J52-P-8A jet engine used on the A-6A and TA-4E attack aircraft. East Hartford. U. S. Navy Aviation Supply Office, Philadelphia, Pa.
- Pratt & Whitney Aircraft Div.,** United Aircraft Corp. \$23,021,783. TF-30 engines for A-7A aircraft. East Hartford. Bureau of Naval Weapons.
- Northwestern Heating & Plumbing Co.,** Evanston, Ill. \$2,488,577. Construction of a steam distribution system at the Naval Training Center, Great Lakes, Ill. Dist. Public Works Officer, Ninth Naval Dist., Bureau of Yards & Docks.
- Republic Electronic Industries Corp.,** Huntington, N. Y. and **Belock Instrument Corp.,** College Point, N. Y. \$3,259,543. Components of navigational sets for use on various Navy and Air Force aircraft. Huntington. U. S. Navy Purchasing Office, Washington, D. C.
- Texas Instruments, Inc.,** Dallas, Tex. \$1,037,170. Spare parts for support of the reconnaissance mapper used on RF-4B aircraft. Dallas. U. S. Navy Purchasing Office, Washington, D. C.
- Bendix Corp., Bendix-Pacific Div.,** North Hollywood, Calif. \$2,571,719. Electronic altimeters for Navy aircraft. Sylmar, Calif. Bureau of Naval Weapons.
- 22—**Giannini Controls Corp.,** Fairfield, N. J. \$1,000,000. Spare parts to support the central air data computer system used on A-6A attack aircraft and the E-2A special electronic installation aircraft. Fairfield. U. S. Navy Aviation Supply Office, Philadelphia, Pa.
- Sperry Farragut Co.,** a div. of Sperry Rand Corp., Bristol, Tenn. \$1,277,031. SHRIKE air-to-surface missiles. Bristol. Bureau of Naval Weapons.
- 25—**Columbia University,** New York, N. Y. \$1,450,000. Continuation of research in the field of marine geophysics. New York, Bermuda and at other islands in the Atlantic Ocean. Office of Naval Research.
- University of California,** Berkeley, Calif. \$1,402,711. Continuation of research on chemical warfare and materials. Berkeley. Office of Naval Research.
- 26—**Honeywell, Inc., Aeronautical Div.,** St. Petersburg, Fla. \$3,932,400. POLARIS accelerometers. St. Petersburg. Special Projects Office.
- Howard Research Corp.,** Arlington, Va. \$2,851,030. Engineering and support services for fleet ballistic missile training installations. Arlington. Special Projects Office.
- General Precision Inc., Librascope Group,** Glendale, Calif. \$1,083,440. Position keeping computers for use in anti-submarine warfare fire control systems aboard surface ships. Glendale. U. S. Navy Purchasing Office.
- Dale Building Co.,** Beverley Hills, Calif. \$1,411,000. Construction of 100 family housing units at the Naval Complex, Mare Island, Calif. Dist. Public Works Officer, Twelfth Naval Dist., Bureau of Yards & Docks.
- 29—**Teledyne Corp.,** Dubrow Electronic Industries Div., Burlington, N. J. \$3,723,511. Communications transmitter receivers and radio sets, with support equipment and spare parts, for installation on naval ships and at shore installations. Burlington and Elwood, N. J. Bureau of Ships.
- General Dynamics Corp., Electric Boat Div.,** Groton, Conn. \$6,209,327. Preparatory work for overhaul, refueling, and A-3 missile retrofit of USS THEODORE ROOSEVELT (SSBN 600) and ABRAHAM LINCOLN (SSBN 602) submarines. Groton. Bureau of Ships.

## Air Force

- 4—**Massachusetts Institute of Technology,** Cambridge, Mass. \$2,300,000. Development of a space stabilized inertial navigation system. Bedford, Mass. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- General Electric Co.,** West Lynn, Mass. \$10,098,000. J-85-GE-13 turbojet engines for F-5 aircraft. West Lynn. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- General Electric Co.,** West Lynn, Mass. \$24,764,000. J-85-GE-5A turbojet engines for T-38 aircraft. West Lynn. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- General Electric Co.,** West Lynn, Mass. \$23,573,700. T-64-6 and T-58-8B turboshaft engines. West Lynn. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- Electro-Optical Systems, Inc.,** Pasadena, Calif. \$1,056,700. Ion thruster systems for orbital flight. Pasadena. Systems Engineering Group, Research Technology Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- 5—**Olin Mathieson Chemical Corp., Chemicals Div.,** New York, N. Y. \$3,193,967. Hydrazine propellant. Saltville, Va. Middletown Air Materiel Area (AFLC), Olmsted AFB, Pa.
- 7—**Burroughs Corp.,** Paoli, Pa. \$2,750,475. Engineering



- services and related materials for the North American Air Defense Command Combat Operations Center. Colorado Springs, Colo. Electronic Systems Div. (AFSC), L. G. Hanscom Field, Bedford, Mass.
- Douglas Aircraft Co., Inc., Santa Monica, Calif. \$1,783,500. Standard launch vehicle boosters. Santa Monica. Space Systems Div. (AFSC), Los Angeles, Calif.
- 8—Radiation, Inc., Melbourne, Fla. \$1,624,000. Signal monitor equipment. Melbourne. Middletown Air Materiel Area (AFLC), Olmsted AFB, Pa.
- 11—Sylvania Electric Products, Inc., Waltham, Mass. \$4,000,000. Fabrication of the medium frequency antenna subsystem for the sixth MINUTEMAN wing. Buffalo, N. Y. and Waltham and Needham, Mass. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- 12—Peter Kiewit Sons Co., Omaha, Neb. \$9,495,000. Modification of TITAN II launch facilities. Davis Monthan AFB, Tucson, Ariz.; Little Rock AFB, Little Rock, Ark.; McConnell AFB, Wichita, Kan.; and Vandenberg AFB, Lompoc, Calif. Army Corps of Engineers Ballistic Missiles Construction Office, Ballistic Systems Div., Norton AFB, San Bernardino, Calif.
- 14—Bendix Corp., Eclipse-Pioneer Div., Teterboro, N. J. \$2,254,926. Spare parts for central air data computers for C-141 aircraft. Teterboro. Middletown Air Materiel Area (AFLC), Olmsted AFB, Pa.
- 15—Olin Mathieson Corp., East Alton, Ill. \$1,393,200. Engine starter cartridges for F-105, B-52 and KC-135 aircraft. Marion, Ohio. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- Radio Corp. of America, Defense Electronics Products, Moorestown, N. J. \$1,404,000. Management services in connection with the Ballistic Missile Early Warning System. Moorestown. Rome Air Materiel Area (AFLC), Griffiss AFB, N. Y.
- 18—Northrop Corp., Hawthorne, Calif. \$6,408,044. F-5A and F-5B aircraft. Hawthorne. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- 19—Martin Marietta Corp., Denver, Colo. \$1,410,000. TITAN II missile instrumentation range safety system kits. Littleton, Colo. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- Thiokol Chemical Corp., Bristol, Pa. \$1,000,000. Research and development of Stage I motors for MINUTEMAN Wing VI. Brigham City, Utah. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- Sylvania Electric Products, Inc., Electronics Systems Div., Mountain View, Calif. \$3,500,000. Testing of an improved electronic security system for MINUTEMAN missile sites. Palo Alto and Mountain View, Calif. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- General Motors Corp., Indianapolis, Ind. \$1,686,704. T56-A-7 turboprop engines and related data. Indianapolis. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- 21—The AC Spark Plug Div., General Motors Corp., Milwaukee, Wis. \$1,315,957. Research and development for the TITAN II inertial guidance system. Milwaukee. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- Thiokol Chemical Corp., Huntsville, Ala. \$2,921,000. Solid rocket motors. Huntsville. Space Systems Div. (AFSC), Los Angeles, Calif.
- 22—Boeing Co., Wichita, Kan. \$2,426,347. Cyclic strength and fatigue testing on a B-52 aircraft. Wichita. Oklahoma City Air Materiel Area (AFLC), Tinker AFB, Okla.
- Goodyear Tire & Rubber Co., Akron, Ohio. \$2,205,609. Main wheels and brakes for F-4 series aircraft. Akron. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- Lockheed-Georgia Co., Marietta, Ga. \$4,000,000. C-130E aircraft and related equipment. Marietta. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- 25—General Electric Co., Syracuse, N. Y. \$1,049,000. Modernization and conversion of radar sets. Syracuse. Rome Air Materiel Area (AFLC), Griffiss AFB, N. Y.
- 26—Douglas Aircraft Co., Inc., Santa Monica, Calif. \$1,598,500. THOR space boosters. Santa Monica. Space Systems Div. (AFLC), Los Angeles, Calif.
- 27—Boeing Co., Airplane Div., Wichita, Kan. \$1,039,000. Load surveys and engineering flight testing of B-52 aircraft. Wichita. Oklahoma City Air Materiel Area (AFLC), Tinker AFB, Okla.
- Bunker-Ramo Corp., Canoga Park, Calif. \$1,400,000. Research and development for survivable control system for special weapons. Canoga Park. Ballistic Systems Div. (AFSC), Norton AFB, San Bernardino, Calif.
- Lockheed-California Co., Lockheed Aircraft Corp., Burbank, Calif. \$1,182,500. Investigation and analysis of, and proposal of corrective action for materiel deficiencies in F-104 series aircraft. Burbank. Sacramento Air Materiel Area (AFLC), McClellan AFB, Calif.
- Lockheed Aircraft Corp., Lockheed Aircraft Services Div., Ontario, Calif. \$1,500,000. Modification of C-133 aircraft. Ontario. Warner Robins Air Materiel Area (AFLC), Robins AFB, Ga.
- 28—Electro-Optical Systems, Inc., Pasadena, Calif. \$1,200,000. Expansion of research and development facilities for ion engines. Pasadena. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.
- Collins Radio Co., Cedar Rapids, Iowa. \$1,055,089. Voice portion of radio communication equipment. Cedar Rapids. Electronic Systems Div. (AFSC), L. G. Hanscom Field, Bedford, Mass.
- 29—General Electric Co., Philadelphia, Pa. \$1,100,000. Development and test of payload vehicles. Philadelphia. Space Systems Div. (AFSC), Los Angeles, Calif.
- Lockheed Aircraft Corp., Burbank, Calif. \$1,996,000. Maintenance of T/TF-104G aircraft to support Military Assistance Program combat crew training. Luke AFB, Phoenix, Ariz. Sacramento Air Materiel Area (AFLC), McClellan AFB, Calif.
- General Electric Co., Utica, N. Y. \$1,640,000. Airborne electronic equipment. Utica. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Dayton, Ohio.



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## Two Important Types of Defense Savings Explained

DOD Cost Reduction Program directives define the two main classes of "hard" savings as follows:

**Budgeted Savings:** Those savings which reduce fund requirements for a specific budget year as reflected in the Five-Year Force Structure and Financial Program submitted by a Military Department to the Office of the Secretary of Defense for inclusion in the President's budget. These savings also include those reductions in the President's budget made by the Congress provided such savings qualify within the criteria contained in DOD Cost Reduction directives.

Budgeted savings represent amounts excluded from the budget estimate of a Military Department because of cost reduction actions. They normally are the result of cost reductions which have continuing benefits in future fiscal years and reduce the total fund requirements in those years. Budgeted savings listings are part of the back-up documentation for DOD budget requests.

**Realized Fund Savings:** Those savings realized in a current year which have resulted from actions taken to reduce costs or requirements for which appropriations were made by the Congress, or for which funds were apportioned and made available for a function, item, or activity. These savings are those not previously identified as Budget Savings.

Realized fund savings are monies saved in appropriated, available funds because of new, improved or intensified management actions. They represent money which cost reduction actions have made available to use for a different purpose than that for which the money was originally earmarked.

Therefore, budgeted savings represent monies which were never requested, while realized fund savings represent monies which were appropriated and saved and which can be reprogrammed to new purposes because of cost reduction actions.

As an example, the Fiscal Year 1966 budget submission of the Department of the Navy identified budgeted savings in excess of \$1 billion. This means that Navy and Marine Corps net financial requirements for FY 1966 are \$1 billion less than they would have been but for accomplished and planned cost reductions.

## New DOD Bibliography on Logistics Available

The 1965 edition of the *Annual DOD Bibliography of Logistics Studies and Related Documents* was released in January. This is the third annual bibliography published by the Defense Logistics Studies Information Exchange, established in 1962.

The bibliography has approximately 1,500 listings, representing the logistics research effort of some 200 different agencies. In addition to data about currently significant logistics studies, which include not only citations with an abstract of the completed studies but also citations with a scope statement for planned and in-process logistics studies, the bibliography lists significant books, magazine articles and theses of interest to logistics researchers and managers. These citations are indexed by subject, contractor (if applicable), and military sponsor.

Copies of the bibliography are being distributed to interested DOD agencies. Certified civilian organizations and other government agencies may obtain copies from the U. S. Army Logistics Management Center, Ft. Lee, Va.